

# The CHILDREN'S NEWSPAPER

AND CHILDREN'S PICTORIAL

*The Story of the World Today for the Men and Women of Tomorrow*

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## THE THOUSAND MEN AT GENOA

### STAR POWER

#### HARNESSING THE MILKY WAY

Extraordinary Instrument for  
Measuring Heat from the Sky

#### MOVED BY A CANDLE 500 MILES AWAY

There is no end to the wonders of modern astronomy. A distinguished scientist has just made a marvellous instrument and carried out experiments that are described as running a motor by star power from the Milky Way.

Stars are, of course, immense, and give out a vast amount of heat and light, but being so far away very little of this energy reaches us. Betelgeuse, for instance, the northernmost star of Orion, is 27 million times bigger than our sun; yet all the light that reaches us from him in 60,000 years is less than a single second of sunlight.

#### Red, Blue, and Yellow Stars

Despite this fact, by means of a wonderfully delicate apparatus that he has made, Dr. W. W. Coblentz, of the United States Bureau of Standards, has actually measured the heat that comes to us from this star. He has also measured the heat, or radiant energy, from over a hundred other stars, from one nebula, and from Venus, Mars, Jupiter, our moon, two of Jupiter's moons, and the rings of Saturn.

The results, Dr. Coblentz declares, show that all the heat, or energy, from all the visible stars shining steadily on a thimbleful of water for a whole century would not raise the temperature one degree. Yet Dr. Coblentz has been able to measure the heat from a single star!

He has also measured the actual temperatures of a number of stars, and finds none as hot as 10,000 degrees, and some as low as 3000 degrees. A star's heat, he explains, is not to be judged by its brightness, for a red star gives out three times the heat of an equally bright blue star; while a yellow star emits twice the heat of the blue.

#### Mystery for the Astronomers

One extraordinary discovery Dr. Coblentz made in the course of his experiments. Rigel, a bright blue star in Orion, was found to be giving out more radiant energy than is the rule with blue stars, and an excessive amount of this was produced by the infra-red rays. This was a great mystery to astronomers till the Director of the Dominion Observatory at Victoria, British Columbia, found Rigel moving to and from the earth rhythmically in an orbit that could only be due to the influence of a companion star. The excessive infra-red rays were evidently coming from a dark companion star of Rigel's, and the rule about blue stars was not upset, after all.

The wonderful apparatus by which Dr. Coblentz carries out his experiments is an improved and extraordinarily sensitive thermo-couple. When two

### Young Japan Goes to Play



The birthday of Buddha is celebrated in Japan on April 8, and is a great children's festival. The scholars get a holiday and march in gala dress from their schools to the public parks, where they have their games. Here we see a crowd of happy children off to play

different metals are welded together and the joint is heated, the heat is transformed into electricity, and by measuring the current the amount of heat can be calculated. Such an instrument is known as a thermo-couple.

Dr. Coblentz made an apparatus more sensitive than anything hitherto known. He welded to the flat end of a hair of platinum a spot of bismuth no bigger than a full stop. Exceedingly thin connecting wires were then joined to the metals, and the whole was placed in a vacuum tube fitted with a window of fluorite, which is transparent to all the rays coming from the stars. Ordinary glass is opaque to some of these rays.

He maintained the vacuum by attaching to the first tube another tube of quartz containing calcium, which when heated absorbed any air or gases left in the first tube. Then he connected the wires with a galvanometer consisting of a fine wire coil and a swinging mirror.

When this apparatus is placed in a large telescope the star's heat rays pass through the fluorite window and fall upon the welded joint, setting up a

current of electricity, and this turns the mirror, so that the heat of a star like Betelgeuse, seven million times as far off as our sun, works a motor on the earth.

The electric current set up is measured in ten thousand millionths of an ampere. From this the star's heat is calculated.

The delicacy of Dr. Coblentz's instrument may be gathered from the fact that with a seven-foot reflector it will respond to the heat of an ordinary candle 500 miles away.

#### WELSHMAN 3000 YEARS OLD

A very interesting discovery has just been made at Nelson, in Glamorganshire.

A human skull and an earthenware vessel have been found in a curious, coffin-shaped stone grave, and these are believed by the authorities of the Welsh National Museum to be at least three thousand years old. In other words, this is the skull of a Welshman who lived a century before David reigned over Israel.

The grave and its contents are to be removed to the Welsh Museum.

### INVADER OF A RESERVOIR

City's Fight With a  
Dangerous Creature

#### SPOILING NEW YORK'S DRINKING WATER

America always seems to be in trouble over pests of some kind.

The latest pest is a microscopic creature known as the synura. It is so small and difficult to examine that men of science are not sure whether it is an animal or a vegetable. Whatever it is, however, it is a great nuisance, for it has invaded the huge reservoir at Kensico, which supplies the Brooklyn and Manhattan districts of New York with water, and, though it does not make the water poisonous, it makes it very unpleasant to the taste by giving it a flavour more or less like cod-liver oil.

All sorts of remedies have been tried, but so far without result. In England a small percentage of permanganate of potash in the water soon destroys the synura, and this remedy is to be tried in New York. Copper sulphate, or blue-stone, a strong poison, is also being tried, but, of course, in such small quantities as to be harmless to human beings.

#### Getting Rid of the Oil

One great difficulty is that, even if the synura are all killed off, the oil they produce remains with its objectionable flavour. Only by boiling the water can this flavour be destroyed. Scientists believe, however, that if they can kill the pest it is possible the oil may disappear by going off as vapour.

Curiously enough, the great Kensico reservoir cannot be emptied and refilled with fresh water except through the pipes that carry it to the houses in Brooklyn and Manhattan. The water can be shut off, but there is no provision for running it to waste.

The difficulty of getting rid of the oily taste in the water of New York is a striking proof of the persistence of an odour. According to one scientist, oil of peppermint can impart a noticeable flavour to fifty million times its own volume of water, while this tiny synura, existing in water to the extent in which it is found at Kensico, will flavour water 25 million times its own volume.

#### Lashing the Water with Whips

The creatures live in little groups, and one of these seen through a powerful microscope looks like a group of sunflower seeds. They are furnished with tiny whips, so thin that they can only be seen, even through the microscope, when they are stained with colour.

With these whips they lash the water, and are thus enabled to move about as if they were rowing in a boat race.

They have invaded still another great reservoir supplying New York with water, the Ashokan Reservoir that contains 130,000 million gallons, though this is tainted to a less extent.



## BOY SCIENTIST'S LONG JOURNEY

8000 Miles to the West  
African Bush

### MESSAGE SENT BY SOUND OF A DRUM

Guy Wernham, the boy scientist explorer who told his story in the Children's Newspaper last December, has reached the end of his 8000-mile journey and arrived at Bitya, in the French Cameroons, West Africa.

As we shall remember, he has gone out to Mr. George Bates to help to collect insects, birds, and small mammals for the Natural History Department of the British Museum.

The young collector was met at Duala, the West African port, and this is how he describes his journey in a letter home.

#### Track in the Forest

"At first the road was good, but after a time it dwindled away to a mere track in the forest. The forest was the most wonderful thing of all to me. It was like walking through a huge hot-house, but with an infinitely greater variety of plants, and with the addition of birds, animals, lizards, and butterflies rivaling the flowers in brightness of colour. I have no objection to travelling in the bush. It is the hills, each of which is a new weariness to the already weary traveller, that tire you. And weary I was toward the end, as I was determined to walk."

The next stage of the journey was to Elat, Ebolowa, 56 miles away.

"What do you think of my adventure?" he writes from here. "I am having the most wonderful time, perhaps the most wonderful ever experienced by a boy of sixteen; for I was told that no boy had ever made this journey before."

#### Sleeping Under a Net

"Last night I slept in a native hut. One has to sleep under a net to avoid mosquitoes and malaria. You would be surprised to hear the noise made by insects at night. There are millions of grasshoppers and crickets, which keep up a constant 'singing,' made by rubbing their hind legs against their wing-cases. When millions are doing this you can imagine the effect. It goes on all night."

"The natives have some interesting customs. If a message has to be sent to a distant village they beat it on a drum, and the next village hears it and sends it on to the next, and so on until it reaches its destination. The drums are made from a hollowed tree-trunk, and the sound carries a great distance."

"Mr. Bates's house at Bitya is of native workmanship—sheets of bark and laths. None of the natives out in the bush speak English, and all the white men speak Bulu, the local African language, of which I have picked up a few words."

And now that Guy has got into touch with Mr. Bates, the most interesting part of his adventure is about to begin.

#### In the Auction Rooms

The following prices have lately been paid in the auction rooms for objects of interest.

A yearling shorthorn bull	£4200
3 Queen Anne tapestry panels	£385
17th-century marqueterie cabinet	£145
A pair of William and Mary chairs	£120
4 Cape of Good Hope 4d. stamps	£85
A landscape by Hobbema	£73
A portrait by Romney	£73
A landscape by Constable	£71
A letter of George Washington	£50
A Hepplewhite mahogany bookcase	£46
Five Chippendale chairs	£28
A sketch by Reynolds	£26
Autograph poem of Charles Lamb	£25
A letter of Charles Lamb	£13
A letter of Wordsworth	£12
A William and Mary side-table	£5

## LEAP FROM AN AEROPLANE

Airman's Thrilling  
Experience

### FOURTH TIME IN A CRASH

Not many men have leaped from aeroplanes and lived to tell how they felt when they threw themselves into the air.

The comrades of Corporal McCausland, R.A.F., say that he bears a charmed life, for he has four times been in aeroplanes that have crashed, and each time has saved himself by jumping out and falling to earth without serious injury.

His fourth experience was at Manston Aerodrome. He went up with an officer. At 1000 feet their engine stopped, and they lost control. The machine glided for a while, then tilted and nose-dived steeply. It looked as if they must both be killed.

When the machine was 20 feet from the ground the corporal jumped clear of it, and fell without greatly hurting himself. He was able to get up and look at the smashed aeroplane, but the officer was injured beyond hope of recovery. That must have been McCausland's certain fate had he not got into the habit of throwing himself out of falling machines.

## OLD SOLDIER'S PONY

To End Its Days Comfortably  
in a Home

The value of publicity has been proved very fortunately for John Keefe, an old soldier who earns his living as a costermonger in London.

He was charged with working a pony in an unfit state, and he explained that he did his best for the poor animal, but could not get it well. He was told it never again could be well enough to work, and at last he consented, with tears on his cheeks, to have it destroyed.

"There goes my living," he said sadly, as the pony was led away.

But kind-hearted people read in the newspapers about Bob and his master, and money was quickly subscribed to buy a new pony, while Our Dumb Friends' League offered to take charge of the poor old past-work pony and find him a comfortable home in which to end his days.

## BRITISH SUBMARINE SINKS

Rammed by a Destroyer near  
Gibraltar

The accident which sent submarine H 42 to the bottom off Gibraltar was one of those mishaps that may occur at any time no matter how perfect mechanism may be.

Collisions occur on the best-regulated railways, and it is impossible to provide against ships running into submarines if the submarines come suddenly to the surface, as this one did.

The destroyer Versatile, which was steaming at 20 knots, saw H 42 appear 30 or 40 yards ahead, and could not avoid it. The ram of the destroyer cut into the submarine, which sank at once with 23 men on board.

This is the tenth British submarine that has been sunk at sea or in harbour since 1904, when they came first into use. Three other disasters have been caused by explosions on board.

#### AFTER MANY YEARS

A postcard posted near Reading in May, 1905, has just been delivered at Sunningdale, in Australia, after 17 years, and as the card bore only a halfpenny stamp it was surcharged twopence.

## UNVEILED BY CHILDREN

Boy and Girl Lead a Public  
Ceremony

### A FINE IDEA IN ESSEX

When the memorial to the men of Barking, Essex, who lost their lives in the war was unveiled there was a bishop present, and a general, and a great many local celebrities.

But neither the ecclesiastical dignitary nor the military commander nor any of the "bigwigs" had been invited to unveil the memorial.

When the time came for the string to be pulled and the cloth which covered the names-plate to be whisked away, two little children stepped forward. One was Clifford Goodhew, a boy of ten; the other, Irene Denthbridge, a girl about the same age. Both lost their fathers in the war.

They stood there a little abashed by their prominence, but ready to do what was expected of them.

The bishop nodded. "Let go," he said. They pulled the strings, and the memorial was uncovered.

There were tears in many eyes as the two fatherless children stood back in their places. It seemed specially appropriate, as well as pathetic, that they should take the chief part in the ceremony.

## CAT REARS A YOUNG RAT

Captive Adopted as a Child

A strange story of the conduct of a mother cat comes from South Africa.

The mother cat, with five kittens of her own in a soap-box, went a-ratting. Coming on a mother rat and five young rats, she killed the mother and four of the young rats, but the fifth of the family she carried off to her own home and suckled it with her kittens.

It was on the eighth day after this strange adoption that a reporter called to see pussy's family, and found the mother cat out, and no young rat visible with her five kittens. But presently the cat returned, missed her foster child, and, searching for it, found it under a patch of straw. She brought it out, put it with the kittens, and proceeded to suckle the whole mixed family.

## DECIDING AN ELECTION

Chairman's Novel Way Out of  
a Dilemma

Recently we recorded an election which was decided, after votes had been several times counted and found to be equal, by drawing lots.

At the election of a public official in the Rhymney Valley district, Wales, votes tied, and the chairman was called upon to give his decision one way or the other—a chairman only votes when there is a tie.

But the chairman contended that both candidates were so worthy and well-qualified that he could not choose one before the other. Let it therefore be said, he left to chance. Spin up a coin and let that decide.

This plan was followed. "Heads this candidate; tails that one," the chairman said. The penny came down; the matter was settled. It was really another way of casting lots.

## OIL FROM SCOTLAND

More Work for Miners

The fine spirit and oil obtained at Broxburn from Scottish shale is again to be produced, and engineers are hard at work getting the stills in order.

For over nine months these rich oil-fields have been standing idle, and high wages have prevented the owners from producing the motor spirit and boiler fuel which had been distilled for so many years from the shale.

The renewal of the oil stills will make work for hundreds of miners.

## ADAMS OR ADAMSKI?

An English Composer's  
Experience

### FOOLISH PREJUDICE THAT SHOULD GO

It is strange that the prejudice in favour of music by composers with foreign names should persist so strongly.

At a recent Queen's Hall concert a London audience heard for the first time a song with a waltz refrain, which had no name attached to it in the programme. Instead of a name it had opposite to it a mark of interrogation.

Inquiries showed that it was by a British composer named Adams. When he took it to a music publisher it was supposed to be foreign, and was pronounced "one of the most beautiful Viennese waltz-songs ever written." As soon as it was known to be the composition of an Englishman it was refused.

"The man with a foreign name can get what he wants. The possessors of British names are at a great disadvantage," said Mr. Adams, who is thinking of calling himself Adamski or Adamstein.

This stupid prejudice has existed for a century at least. It is time that it was rooted out.

## AFTER 300 YEARS

Milk and Cake Stall That  
Must Disappear

The old lady whose family has sold milk and cakes in St. James's Park, London, ever since the days of Charles the First is in trouble again.

Up to 1905 cows used to be milked on the spot and to pasture on the succulent grass of an enclosure reserved for them. They had to go at last, and now Mrs. Caroline Orford's little stall is to be removed to make room for a Guards' war memorial.

On another site close by, the Office of Works, which looks after the parks, intends to build a "refreshment pavilion." That has an ominous sound. It suggests something very ornate and out of keeping with the quiet rural aspect of grass and green trees.

Mrs. Orford is afraid that some big firm will get the contract to supply refreshments here. She is quite ready to pay as much as she can afford, but, of course, she cannot give a fancy rent.

## RUSTLESS IRON

Valuable Discovery at Sheffield

In quiet laboratories all over the world men are patiently and carefully working out problems and making discoveries that add to our mastery over the elements of Nature.

Some years ago, in one of these laboratories, established for research by two firms in Sheffield, stainless steel was discovered, almost by accident, it was said; though it can never be maintained that research workers ever find out anything merely by chance.

Now in the same laboratory rustless iron has been produced—the fruit of long experiments which may turn out to have a revolutionary effect upon our engineering industry.

Often it is asked what is the good of research work, and it is suggested that, unless results are produced that immediately increase profits, it is useless to endow laboratories.

Here is a complete answer both to the query and to the suggestion. Without scientific investigation carried on without regard to immediate paying results, industry would soon languish and decay.

## Pronunciations in this Paper

Boötes	Bo-o-teez
Bottisham	Bot-tish-ham
Czecho	Check-o
Slovakia	Slo-vah-ke-ah
Genoa	Jen-o-ah
Hobbema	Hob-be-mah
Magdala	Mahg-dah-lah
Regina	Re-ji-nah
Verulam	Ver-oo-lam



## THE ELECTRICITY OF A STORM

### Interesting Atmosphere Experiments

#### 300 MILES ABOVE THE EARTH

Observations made in Norway concerning the height of the Aurora Borealis have shown that there is sufficient atmosphere even 300 miles above the earth to be electrically stimulated to produce the wonderful Northern Lights.

In 1706 Sir Isaac Newton calculated that 228 miles above the earth the air is a million million million times rarer than it is just above the earth. Yet this almost infinitesimal amount of atmosphere is sufficient to glow under electrical excitement.

Professor Störmer's measurements, which have created great interest in the world of science, happen to come at a time when electrical men are imitating this mysteriously rare atmosphere in the laboratory.

#### Electric Fields in the Air

In making the famous Coolidge X-ray tube all but a thousand-millionth of the air in the tube is exhausted by means of a special type of mercury air-pump. Yet a moderate electric current of sufficiently high voltage, two hundred times higher than that used in lighting an ordinary electric lamp, will cause these tubes to give out rays that have now been found to travel five hundred yards.

During the time that Professor Störmer has been making his experiments a Swedish physicist named Norinder has been making measurements of the voltage in the electric fields set up in the air by storms. He has measured the difference in voltage between two horizontal wires 120 feet high in the air and a yard apart, and found that there is sometimes a difference of a hundred thousand volts between these two points a yard apart during a thunder-storm!

With electric discharges of this character flying about in the air, and the experiences we know of in the laboratory with vacuum tubes, it is not difficult to understand how the Aurora can be flashed to us from Northern countries, from an atmosphere that is almost "nothing" three hundred miles up in the sky.

## BIRDS NEAR TOWNS

### Useful Book for the Nature Lover

Those who live in and near large towns need not be deprived of the pleasures of nature study, for in the environs of our British towns there are always plenty of birds and butterflies and beetles to be found by those who know where to search.

For the bird lover who lives in London an excellent little book which will act as a useful guide to the bird life round about the great metropolis is Dr. George H. Vos's "Birds and Their Nests and Eggs Found in and near Great Towns" (Routledge and Sons. 7s. 6d.).

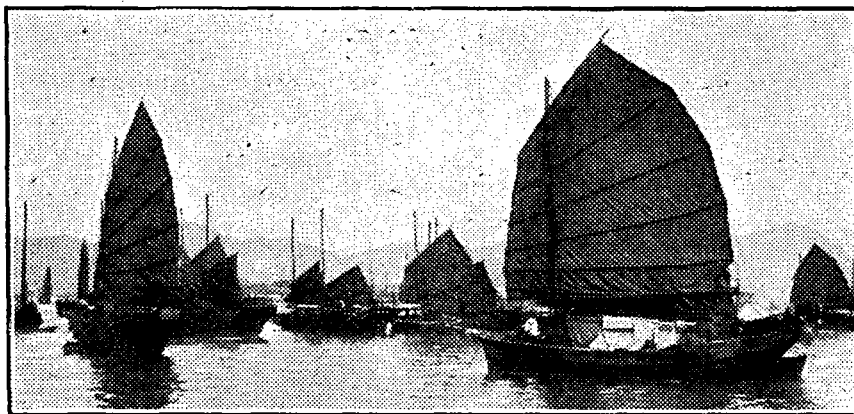
There are three series bound into one volume, and the whole is illustrated with very beautiful photographs of birds and nests and eggs.

Dr. Vos describes his rambles with a friend within 16 miles of the heart of the City, and tells of the many feathered friends he found and photographed. The book is attractively written, and is a mine of information.

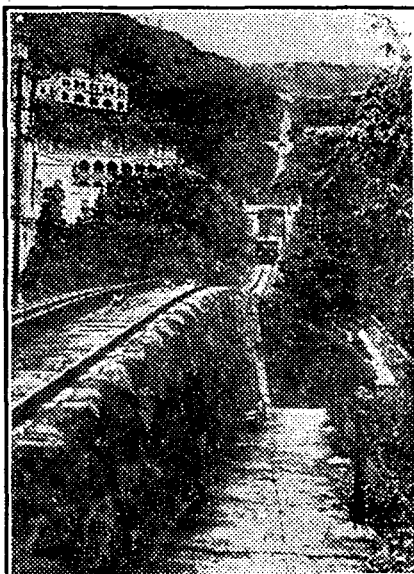
Even the reader who when he begins to read knows nothing about British birds will be quite an expert nature student by the time he has finished, and no better book could be put into the hands of a town boy or girl who is interested in nature.

It is educational in the best and most attractive sense of the word.

## TINY ISLAND WITH A GREAT FUTURE



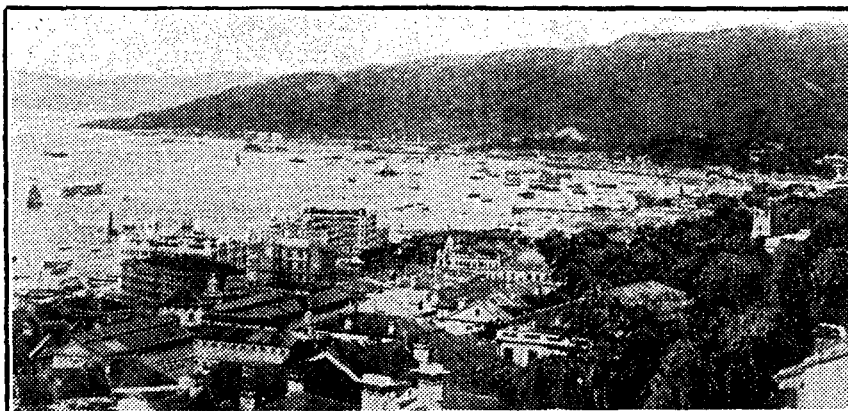
Junks in the harbour at Victoria, Hong Kong, drying their sails after a storm



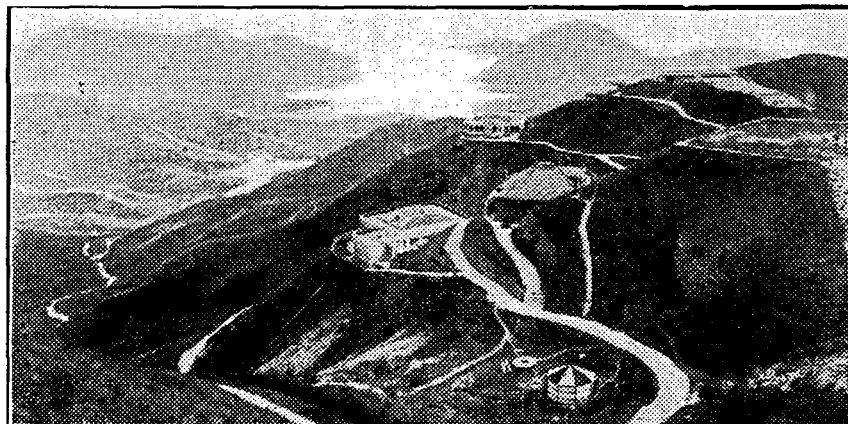
A switchback tramway across the hills



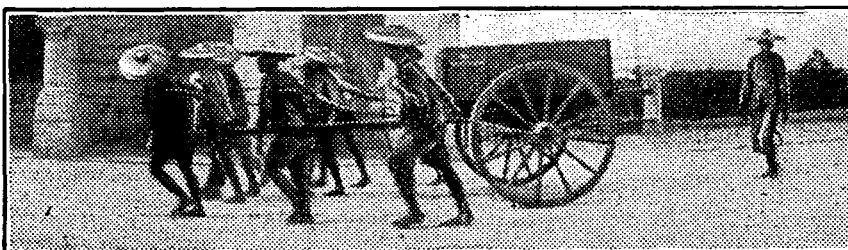
A street scene in the busy capital



The view across the splendid harbour of Victoria



The beauty of the hilltops as seen from Victoria Peak



A typical group of Hong Kong coolies at work in the street

In calling at Hong Kong the Prince of Wales is visiting one of the finest natural harbours in the world, that of Victoria, the capital, which is the headquarters of European finance in the East and the biggest port in the world, judged by the number of vessels of all nationalities that go in and out every year. It is a triumph of British commercial enterprise, and these pictures show some typical and picturesque scenes in the beautiful island, whose name, Hong Kong, means Sweet Waters. See next column.

## HONG KONG

### LARGEST PORT IN THE WORLD

#### Island's Prosperity Under British Rule

### GREAT FUTURE FOR A SMALL PLACE

The growth of Hong Kong under British rule is one of the most amazing facts in recent history.

Eighty years ago, when it was ceded to Britain, this small island had a population of 5000 people, most of whom were pirates. Now, according to the recent census, the population has grown to 616,749, but that figure does not represent the true state of affairs.

When the census was taken the great annual Chinese festival of Ching Ming was being kept. At that festival all dutiful Chinamen have to do obeisance at the tombs of their ancestors, and thousands of men return to the mainland to perform this sacred rite.

#### Scared by a Census

Then, again, many of the poorer and more ignorant Chinese of Hong Kong feared that the Government had some sinister object in taking the census, and they took elaborate pains to keep their names off the census papers. The result is that the population is not shown at its true figure. Reliable authorities estimate the actual population of Hong Kong at about three-quarters of a million.

Unlike Great Britain and most other countries, Hong Kong has a great excess of males over females. The figures, as revealed by the census, are: males, 380,373; females, 236,376. As only men go to the mainland for the Ching Ming festival there is no doubt a still greater excess of males over females.

The enormous growth of the population of Hong Kong is, of course, due to good government; and the great commercial prosperity of the island is the result of British enterprise and organisation. Traders of all nations welcome the security which they now enjoy and which is such a striking contrast to the piracy and insecurity under the old rule.

#### Finest Roads in the East

The island has the finest roads in the Far East, and some of the most beautiful buildings, including magnificent Law Courts, with the same law for Chinese and British, and a university for Chinese, where degrees can be obtained equal in status to those of a home university.

Recently, for the Bachelor of Science degree in engineering, the final papers were sent home to the London University to be marked. They were returned marked "With honours." No mean thing for Chinese students to accomplish!

The area of the colony being limited by the surrounding sea, the value of land is constantly increasing, and in the business quarter of Victoria, the chief city, office rents are as high as in the heart of the City of London.

#### Need of Cheap Coal

Hong Kong is not only the largest port in the world, but is the natural distributing centre for the whole of South China, and as transport facilities are improved on the mainland and trade increases, so Hong Kong must grow in importance, wealth, and population.

The great need of the colony is cheap coal, and if this becomes available there is no doubt that Hong Kong, the once despised haunt of pirates, will become one of the largest industrial centres in the world. Already about twice as many ships enter and leave the port as enter and leave the great Port of London.

The rise of this island from obscurity to wealth and fame in the course of less than a century is one of the romances of commerce.

*Pictures on this page*

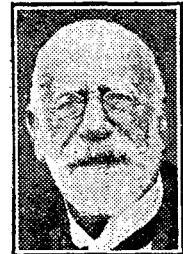


## SQUATTER EARL

### Returns to England After 67 Years

#### ROMANCE OF THE EMPIRE

An old gentleman has arrived in England to see what changes have been made in the country of his birth during the 67 years that he has been absent from it.



Lord Ducie

He went to Australia in 1855 as a young man of 20. He was a younger son of the Earl of Ducie, and, like many younger sons of peers, he had his own way to make in the world. When he left the Crimean War was in progress, the ladies were wearing crinolines, the policemen wore tall hats instead of helmets, it was fashionable to speak of tea as taw, and to say oblige for obliged, and it took him three months to get to Australia in a small sailing ship of 900 tons.

He "squatted" on vacant land, became a sheep farmer, prospered, married, brought up a family of six daughters and two sons, went into Queensland politics, became a minister, and then, at the age of 87, learned that his elder brother had died, leaving the title and the family estates to him. The Moretons are long-lived; his brother had lived to 94.

At once the "squatter earl" resolved to come home and take possession of his heritage. It was a great uprooting for so old a man, but he enjoyed it, and arrived in England full of vigour.

He did not like passing through the revolving glass doors at his hotel, and he looked at the dress both of men and women with curiosity; but he said he should soon settle down.

#### THE VICTORY SAFE

##### Nelson's Famous Ship on Shore

The old Victory, Nelson's flagship, the famous old man-o'-war with "wooden walls," is not to be broken up, nor is she to be repaired.

To make her water-tight would have cost £100,000, and even then, with her hull in such a bad state and dry-rot in her timbers, she could not have been safely exposed to wind and water.

So she is to remain in dry-dock, where it will be much easier for the public to see her, and where it will be possible to preserve the old ship for many years yet. Near the main entrance to Portsmouth Dockyard she will be a prominent object of interest, and with a steel cradle round her there will be no risk of her falling to pieces.

Whether the vessel shall be restored to the condition in which she was when the Battle of Trafalgar was fought and Nelson killed on her deck will be settled later. The change would be much more simple to make in dry-dock than at her old moorings in the harbour.

#### NOTHING EVER LOST

##### Our Unconscious Memory

How we unconsciously remember everything we hear, even though we may pay no attention to it at the time of hearing, was illustrated by Sir Frederick Mott, the pathologist, in a lecture.

A servant girl in a high state of fever and delirium spoke what was supposed at first to be gibberish. But someone at her bedside recognised it for Hebrew. She was reciting passages of the Hebrew scripture and comments upon them.

She was not a Jewish girl, she knew not a word of Hebrew. How could these passages have got into her mind? The mystery seemed insoluble.

But inquiry into her life showed that once she had been for a short time servant in the house of a Jewish rabbi, who used to rehearse his sermons aloud.

As she went about her work she had heard him, and, though she did not know it, his words were preserved in her memory until, disordered by delirium, it brought them out with a rush.

## PARADOX OF PROGRESS

### Cultivation Increases Floods

#### THE NATURAL SPONGE ON A FOREST SLOPE

Malaya is the scene of a curious paradox at the present time.

Large areas of the Federated Malay States have in recent years been cleared of forests and tropical undergrowth and opened up to cultivation and mining; but this advance of civilisation has had a disastrous effect in increasing the frequency and severity of floods.

The reason can be easily understood. Formerly the dense tropical vegetation of the forests acted as a sponge and retained for a considerable time the water that fell as rain, allowing it to run away slowly, so that the rivers were not choked. The removal of this sponge-like growth, however, has facilitated the rapid running-away of the rain into the rivers, with the result that the channels are quickly filled and overflow their banks.

Not only so, but the escape of large quantities of coarse sand from the mine-workings into the rivers has in many cases choked and destroyed their channels, and this has added to the difficulties.

So serious has the matter become that the authorities have consulted engineering experts, who suggest that embankments shall be built, channels extended, and new canals cut in order to confine the water within proper bounds and carry it away in a regular and systematic manner.

No doubt a satisfactory way out of the difficulty will be found, but it is certainly curious that the spread of civilisation, which usually means the mastery of such troubles as floods, is, in Malaya, leading to exactly the opposite result. See *World Map*

## ANNEXING AN ARCTIC ISLAND

### How the World Has Altered

The change that has taken place in the world during the last hundred years could not be better illustrated than by the reception of the news that the Scandinavian explorer Stefansson had annexed an island in the Arctic Sea to the British Empire.

This was the way in which islands and other territories in distant, unknown regions used to be added to the possessions of European States. All that had to be done was to hoist a flag, and then to send out an official or two.

Now the world has been to a much greater extent settled and civilised. Law has been established, and the rights of property are more closely looked after.

Any nation which considers itself deprived of territory belonging to it can call upon the League of Nations to intervene. There is no longer territory in any part of the world which can be seized in the simple, artless manner which Mr. Stefansson followed.

He "took" Wrangel Island, which lies off the coast of Northern Siberia, near the narrow strait dividing Asia from Alaska and the North American continent, and he proposed to present it to Great Britain. But as soon as this was heard of a hubbub arose. The American flag is said to have been hoisted also.

The ownership of the island must be decided by proper legal methods. The "snapping-up of unconsidered trifles" is not permitted among nations any more than it is among individuals. That is a notable gain. See *World Map*

#### WATCH FOUND IN A SNOWDRIFT

A gold watch lost in the snow on a mountain in British Columbia ten years ago was found by a mountaineer recently, and was in perfect condition, keeping time to the minute when it was wound up.

The owner, a professor in Yale University, was found through an inscription on the back.

## NEW RAILWAY IN EUROPE

### Link Between North and South Norway

#### PEASANT GUIDES WHO PAID NO TAXES

The completion of the railway between Dombaas and Stoeren means that the North and South of Norway are now connected by a railway, a great boon for those whose business takes them from one part of the country to the other.

Hitherto the only means of communication between Norway south of the Dovre Field and Norway north of it has been by way of a very difficult road across the mountains.

So difficult, indeed, was this road that travellers almost invariably needed help in traversing it, and in some mountain parishes the peasants were exempt from all taxation because they were under the obligation to convey travellers from place to place in primitive two-wheeled carts.

Now the new railway has taken the place of this antiquated system. The line, which is a hundred miles long, has taken ten years to build, and there are 23 tunnels and 87 bridges in its course.

As can be imagined, the railway presented very great engineering difficulties, built as it was amid mountains with almost precipitous sides. But all has been completed satisfactorily, and the railway is a triumph of modern engineering skill. See *World Map*

## MYSTERY OF MODERN ENGINEERING

### Nine Million Tons of Coal Wasted

The enormous amount of heat wasted in generating electric current by modern methods was described by an expert at a recent lecture before the Institution of Electrical Engineers. It is not generally known what colossal figures are involved. Fifteen million pounds' worth of coal is used every year to make our electricity, and nearly 14 millions of this amount, the value of about nine million tons of coal, is wasted.

It is one of the great mysteries of modern engineering that, in spite of the vast knowledge accumulated today, electricity cannot be produced without wasting about nine-tenths of the coal used at the generating stations.

The solution of the problem appears to lie in concentrating the sources of electric power. The super-station, where current can be made on the most modern lines with as little coal as possible, is urgently needed.

## 360 FARTHINGS

### Why the Post Office Refused Them

What is legal tender? It is a phrase meaning that you cannot force anyone to accept payment in silver for a debt of over £2, and that no one need take pennies, halfpennies, or farthings if the amount owed is more than one shilling.

It is not often, however, that this law has to be enforced. It was invoked at the Greenwich Post Office when a poor woman tendered 360 farthings and asked for a dog licence costing 7s. 6d. The postmaster refused to accept the farthings, and a short time afterwards the woman was summoned for keeping the dog without a licence.

It was suggested that her seven children had been collecting the farthings to pay for the dog's licence because they were fond of him, but the magistrate said she must pay a fine of 3s. 6d.

#### A GREAT GOLD HOARD

The greatest amount of gold ever assembled in one place lies in a Government building in New York. Its value is fifteen hundred million dollars, and it is said to represent one-fifth of all the gold that has been produced since the beginning of civilisation.

## HANDING OUT SMILES

### THE TRUE WAY TO BECOME HAPPY

#### Being Good and Doing Good

#### CHIEF SCOUT'S TALK TO HIS COMRADES

By Sir Robert Baden-Powell

"There is an idea abroad among moral people that they should make their neighbours good. One person I have to make good—that is myself. But my duty to my neighbour is to make him happy—if I may."

That is what Robert Louis Stevenson, the writer of Treasure Island and many other good stories, has said. And he describes just what every Scout ought to aim at—to make himself good and to make other people happy.

That is what the Scout's Promise teaches: "To do my duty to God and the King; To obey the Scout Law"—that is, to make myself a good citizen; "To help other people at all times"—that is, to make my neighbours happy. That is why Boy Scouts do not go about handing out tracts; they hand out smiles and good turns instead.

#### Boy Who Never Groused

A man gave us some money for the Boy Scouts the other day, and he explained why he did it.

He said that his son, who was badly wounded in the war, has been on his back ever since, and now, after all these years of doctoring and pain, his wounded leg has to be amputated. But he has never once groused or been anything but cheery, even when suffering terrible pain, and the reason he gives is his Boy Scout training.

A week or two ago a boy picked up a wallet in Baker Street containing £20 in money, and, the name and address being inside, restored it to its owner, who was, of course, delighted to get it back. He offered £1 to the boy, who saluted and refused it, saying, "It was my good turn for today, sir," and walked away smiling.

I do not know the boy's name or his troop, but he acted like the true Scout he is, and brought credit on himself and his movement.

The way to make yourself into a good citizen is not merely to be good but to do good, because by doing good you are helping others as well as yourself.

#### Living Up to the Promise

Last Christmas I suggested to Scouts all over the country that we might do a very special good turn this Christmas and see how many people could be given a bit of Christmas happiness.

I certainly never expected quite such splendid good turns, even from Scouts, as were done.

In hundreds of places they turned to and gave presents to the poorest children, or entertained to dinner or tea old people who might otherwise have gone hungry, at Christmas. From one place I heard of 750 poor children sitting down together to a meal provided and served by the Scouts; in another of 600 old people being entertained.

Well, it shows what can be done in the way of good turns, and it is very cheering to hear of Scouts living up so well to their promise.

Even if by so doing you do not set out to make your neighbours good, you can, at any rate, make yourself happy.

#### 15,000 FEWER AEROPLANES

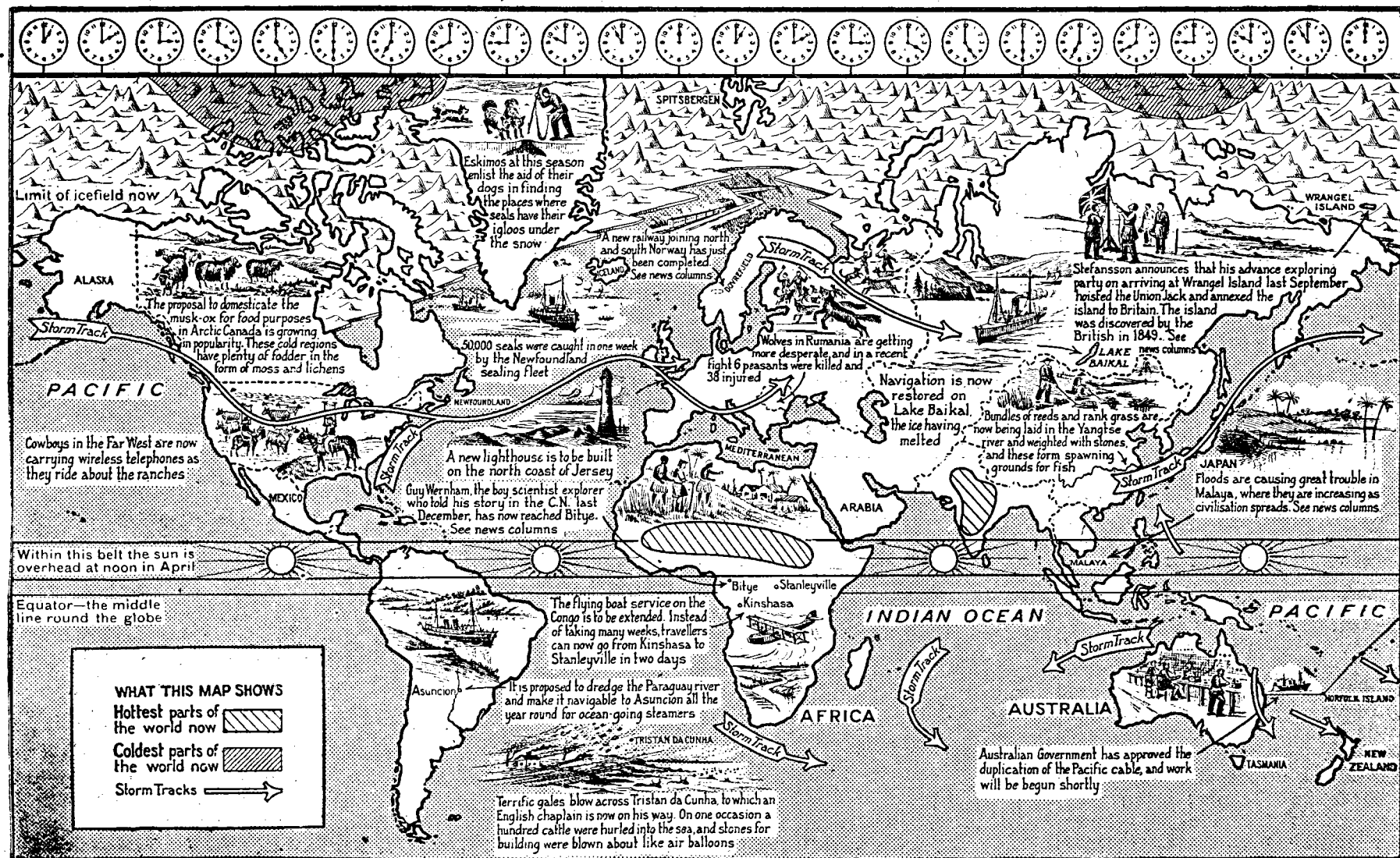
Another step toward disarmament has been taken. The task of destroying close on 15,000 German aeroplanes has been completed. One nation is powerless to attack from the air.

In these aeroplanes were nearly 30,000 motors of high power and fine workmanship. Most of these have been destroyed. It seems a pity that some peaceful use could not be found for them.

Meanwhile other nations are building and improving aeroplanes for use in war. When will the nations that have disarmed Germany disarm themselves?



# PICTURE-NEWS AND TIME MAP SHOWING STORMS ALL OVER THE WORLD



## HUNT FOR STRANGE ANIMAL

### Argentine Expedition Starts for Patagonia

The expedition that is being sent from the Argentine Republic to hunt for a strange, gigantic animal seen by an Englishman in Patagonia, and resembling the extinct marine monster the Plesiosaurus, is to start at once.

Professor Onelli, of the Buenos Aires Zoological Gardens, has organised it, and the Ministry of Agriculture is lending an official to take command. Several motor-vans filled with provisions and scientific instruments are to be taken.

It now appears that a similar creature was seen in 1890 by the governor of a district in Patagonia. It was covered with reddish hair, and had such a tough, scaly skin that bullets glanced off it.

In 1892, from another place, something of the same nature was reported; and now, at Lake Blanca, Argentine subjects say they saw a monster swimming with a long neck out of the water.

It will be very interesting to see what the expedition discovers.

## NO BULL-FIGHTS FOR FRANCE

### Triumph for Animal Lovers

By the efforts of British animal lovers and haters of cruelty, the proposal to introduce bull-fighting into France has been killed.

It was at Cannes, the lovely town of palms and blue sky on the Mediterranean, that the revolting sport was to have taken place. As soon as the bull-fights were advertised protests were made by British visitors and by newspapers in England.

Nothing was done, however, until the hotel-keepers became alarmed at the threats of British visitors to leave the town. They went to the mayor and told him that the prosperity of the town was in danger, and at last he agreed to stop the bull-fight from being held.

A fine victory won for decency and kindness to our animal friends!

## UPS AND DOWNS IN RUSSIA

### Colonel Who Drives a Paris Taxi-Cab

Both in London and in Paris, as well as in other cities farther east, there are many Russians, once wealthy and holders of high positions, who find it difficult to keep themselves alive.

In Paris a young man who had been a lieutenant in one of the Tsar's crack regiments hailed a taxi-cab the other evening and was astonished to hear the driver speak to him in Russian, calling him by his name. He looked up at the shabby man before him, and recognised the former colonel of his regiment, a well-known figure at the Tsar's Court.

The ex-colonel told his former subaltern that in a little cabmen's shelter he could meet other old friends.

There they found three officers who had been in the Guards and one Cossack captain, all brought down to the depths of poverty. For once they had a good dinner; the lieutenant stood treat.

## NEWSBOYS HELP THEIR TOWN

### Saving the Firemen's Hose

A fire in some Canadian towns is a very serious thing, for many of the houses are built of wood. So anyone who stops a fire is a great benefactor. And recently two newspaper-selling boys in New Westminster, British Columbia, if they did not stop a fire, at least prevented the fire-engines from being hindered in putting it out.

The fire was growing, and the fire brigade had reached it and were hard at work trying to master it with water brought by a hose which crossed the Canadian Pacific Railway line, when Arthur Lower and George Mackay saw a train coming along that would cut the hose and leave the fire brigade powerless.

They understood what was needed and how to do it. They went boldly up the line, faced the train, and signalled it to stop. Well done, young Canada!

## LOST IN THE ARCTIC

### Unavailing Search for Explorers in Polar Zone

There is sad reading in the report of the Norwegian Polar expedition which went out in search of the two men who were lost from Captain Amundsen's party in 1918.

The searchers started last summer and drove for months in sledges, seeking for news or signs of the missing pair. Nothing could be found to prove whether they were alive or dead, though ashes of a fire that they had lighted were discovered with the bones of some animal they had cooked, and near by was a letter stating that they intended to start for Dickson Island in the Kara Sea.

That letter was dated November 14, 1920, two years after they had been separated from their comrades.

So the mystery of their fate is still unsolved. The search party presumed them to have perished, and put up a memorial to them near the camp mentioned above.

It is just possible that they may still be alive. At all events, the seekers deserve great credit for their pluck and perseverance in their search.

## ENERGY AT 103

### Centenarian Who Wants Work

That a man should live to the age of 103 and want anything at all is surprising. That he should ask to be allowed to work in order to get back to his home is surely a record in old-age activity.

It is William Gallop, in an institution at Willesden, London, who is anxious to find a job. He used to live at Bath, and there he had a comfortable room to himself, to which he would like to return.

In the meantime he is writing the history of his life, which began on April, 1819. He can still read without spectacles, and is as lively as any inmate of his institution ward.

## BOTTLE'S LONG VOYAGE

### Message Found After Fifty Years

A bottle with a message in it from a shipwrecked crew has reached its destination after forty-eight years!

In 1874 an Austrian Polar expedition had its ship jammed in the ice pack off the land which it had discovered and named Franz Josef Land, after the Austrian Emperor. The timbers cracked, the sides of the ship were stove in, and it was clear she would never float again.

So the crew abandoned her, and, as they were not at all sure that they would ever be heard of again, they put a letter in a bottle and made a hole in the ice so that it might get into the water and be carried away by the current.

Then they packed up the ship's boats, filled with provisions, upon sledges, and pulled them over the ice till they came to water and could launch them.

Fortunately, they were soon picked up by a Russian vessel and reached home safely. They often wondered what had become of their bottle.

Lately it was found on the coast of Nova Zembla, and now it has been received at the address in Vienna which was on the envelope of the letter.

## LEARNED CHINAMAN

### Ancient Writing on Shells

The Académie des Belles Lettres in France has elected four new foreign correspondents, one of whom is a Chinaman.

This gentleman is the first representative of his country to sit at the Institute of France—the union of the various French academies. He is the eminent expositor Lo-Tchen-yu of Tientsin, whose most remarkable works are the reading of ancient prophetic inscriptions on tortoise-shells and bones.

Lo-Tchen-yu is at the same time a historian, an archaeologist, an art critic, and a bibliographer.



## CHILDREN'S NEWSPAPER

APRIL 8 1922

## What Will They Find in Genoa?

A THOUSAND men are going to Genoa. They are going to find the way that leads to happiness for Europe, and all mankind will wish them well.

Long ago a boy looked out on the world from a window in Genoa and wondered where all those ships were going. There must be a great world beyond, he thought; and he dreamed of the day when he, too, would have a ship and ride the seas.

The years rolled on, his dream came true, and Columbus, amid the scorn of priests and kings, through storms and mutinies, through peril and despair, discovered his New World. He found a continent lost to history for a thousand years. He opened the gates of America.

And now the nations go to Genoa. They go on a voyage of discovery to the home of the great discoverer; they go to find a way of putting Humpty-Dumpty Europe on its feet again.

They go to seek a way for making good the ruin of war; for setting up a real Peace where a sham Peace reigns; for making the wheels of trade go round; for taking useful things from places where they lie useless to the places where people are yearning for them; for building up homes for heroes to live in and hope for heroes to live with; for loading our ships and trains with goods and sending them about the earth; for opening markets everywhere, and opening human hearts to trust and confidence again. Great purposes are these, and noble aims.

We think of that story of a war in which a lanky youth named Abraham Lincoln was a captain. It was long before the world had heard of him, and the United States was fighting Red Men on the banks of Wisconsin River.

One night, as the camp-fires were flashing in the darkness, the voice of a Red Man was heard crying aloud, but no one knew what the strange cry meant. Perhaps the Red Men were preparing an attack. It was not till many more lives were lost that the Americans understood that the voice in the night was the voice of a chief crying out for peace—crying for peace in an unknown tongue.

We commend this story to the thousand men at Genoa. The whole world cries for peace, for its lost happiness, and it cries in a tongue that all men know. A great thing it will be if, in that home where Columbus dreamed of his New World, there should at last be found the key of that New World that we were promised, for which our manhood died, that Millennium of goodwill that even now is awaiting us if we will but enter in

A. M.



## THE EDITOR'S TABLE

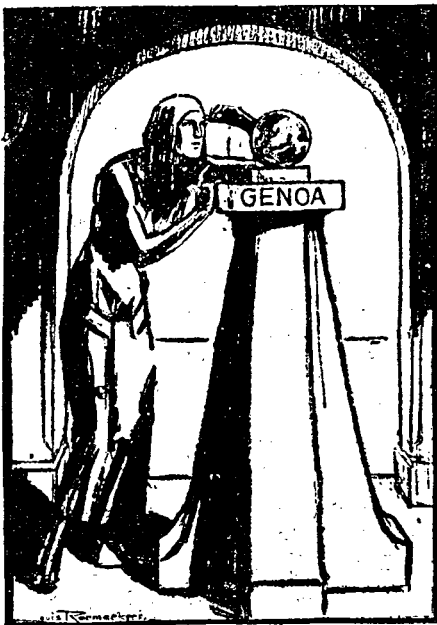
Fleetway House, Farringdon Street, London  
above the hidden waters of the ancient River Fleet, the  
cradle of the Journalism of the world



## The Use of Eyes

ONE of the uses of the Great War—not at all worth its cost, but still of some value—was that it taught large numbers of men to use their eyes at all distances. Such a use of eyes is a point that ought to be remembered in all education.

Three people out of four who live in towns only look habitually close around them. They rarely practise their eyes a quarter of a mile away, and almost never a mile around, unless they have special reasons for doing so. And yet the beauties of the earth are spread with equal hand far and near.



What Will it Bring for Mankind?

From a recent cartoon by the famous Dutch artist, Louis Raemaekers

## Spoiling a Beautiful Thing

A WELL-KNOWN poet writes to us about the hymn which most people have sung at one time or another, beginning with the verse:

As pants the hart for cooling streams  
When heated in the chase,  
So longs my soul, O God, for Thee  
And Thy refreshing grace.

So beautiful is the music that scarcely anyone notices a grave defect in this verse. But compare it with the noble psalm which Nicholas Brady and Nahum Tate paraphrased and rhymed in this hymn:

Like as the hart desireth the water brooks:  
so longeth my soul after Thee, O God.

What is the excuse for the second line: "When heated in the chase"? "The vision raised by the Psalmist," says a sound critic, "is of the beautiful creature coming in peace to drink of the water brooks, unmolested by any of the bellowing brutality of the chase."

The fault is not only an ugly one, spoiling a beautiful vision by the thought of the brutality of hunting, but it is a bad one, for the whole truth of the image lies in the naturalness of the thirst and in the peaceful manner in which that thirst can be refreshed.

Thousands of people sing hymns without serious thought of the words, but is it not a pity to go on singing hymns with ugly thoughts in them?

## Are You Commonplace?

NEARLY all children like animals, and admire some of them, especially when the animals are young.

Who can help being charmed by kittens when they are becoming active? What is there that is more graceful and so full of its own pretty fancies? A kitten is itself!

Which is your least favourite animal? Is it not the sheep? A lamb is very well in its innocence and simplicity—but a sheep! Well, a sheep is just commonplace. Every sheep seems bent on being exactly like every other sheep. So it is the dullest of dumb creatures.

You would not be like that. But are you? Think! Don't you want to do what others do, and to wear what others wear? The fine name for that is—fashion. The real thing is being commonplace, like the sheep.

But that is just the way to be a nobody. What the world wants from each of us is individuality.

## Tip-Cat

AMERICA can hardly take her interest out of Europe without taking some interest in Europe.

WHAT most Post Office staffs need is a little uncivil service reform.

A CONTEMPORARY wants to know what has become of all the spring poets. They are waiting for leap year.

THE rising generation is too fond of sitting.

RUSSIA would be better off if her presses were directed toward the printing of news instead of roubles.

HISTORY is described as a way of looking at facts. And not always seeing them.

GAMES have their periods, says a professor. Yet they never come to a full stop.

ACCORDING to Mr. A. G. Gardiner, the best of all habits is to break habits. Then we should have to spend the rest of our lives in mending them.

CHEAP slippers are coming from Germany. Cheap trippers have not yet begun.

LIVING above his position: The draper who lives over his shop.

## The Children to the Grown-ups

WHEN you go, and pass from us,  
Will the world be safe for us:  
Joyous and adventurous,  
Tomorrow and tomorrow?

Or must we rise, some other day,  
Sword in hand, to seek and slay  
Other children, now at play,  
Brothers of our sorrow?



PETER PUCK  
WANTS  
TO KNOW  
How many  
inches make  
a shipyard

## An Old Man Talks to an Old Friend

Who does not love the books of Jean Henri Fabre, the old Frenchman with the wonderful patience of Darwin who spent his life with his insect friends and wrote about their lives in his books?

We have come across a little talk he had one day with the table on which he wrote down the hundreds of marvellous stories of insect life that will live and keep his memory green. We give it here, this talk of a wise old man with his little wooden table.

Poor little walnut board, I have been faithful to you for half a century.

You would not recognise me, little friend, if you could give a glance at my grey mane. Where is the cheerful face of former days, bright with enthusiasm and hope? *I have aged, I have aged.*

## Population of a Table

And you, what a falling off since you came to me from the dealer's, gleaming and polished and smelling so good with your beeswax! Like your master, you have wrinkles, often my work, I admit; for how many times have I not dug my pen into you when, after its dip in the muddy inkpot, the nib refused to write decently!

One of your corners is broken off; the boards are beginning to come loose. Inside you I hear, from time to time, the plane of the Death-watch. From year to year new galleries are excavated, endangering your solidity. The old ones show on the outside in the shape of tiny, round holes. A stranger has seized upon them, excellent quarters, obtained without trouble. I see the impudent intruder run nimbly under my elbow and penetrate forthwith into the tunnel abandoned by the Death-watch. She is after game, this slender huntress, clad in black, busy collecting wood lice for her grubs. *A whole nation is devouring you, you old table; I am writing on a swarm of insects!*

## What Will Happen to It?

What will become of you when your master is gone? Will you be knocked down for a franc when the family come to apportion my poor spoils? Will you be turned into a stand for the pitcher beside the pitcher-sink? Will you be the plank on which the cabbages are shredded? Or will my children agree and say:

*Let us preserve the relic. It was where he toiled so hard to teach himself and make himself capable of teaching others; it was where he so long consumed his strength to find food for us when we were little. Let us keep the sacred plank.*

I dare not believe in such a future for you. You will pass into strange hands, O my old friend; you will become a bedside table, laden with bowl after bowl of linseed tea, until, decrepit, rickety, and broken down, you are chopped up to feed the flames for a brief moment under the simmering saucepan. You will vanish in smoke to join my labours in that other smoke, oblivion, the ultimate resting-place of our vain agitations.



## WHAT MIGHT BE DONE AT GENOA COMING GATHERING OF THE NATIONS

### The Opportunity to Make Humanity Safe and Happy INFLUENCE OF AMERICA

By Our Political Correspondent

When the representatives of the European nations, including Russia, meet at Genoa, the city of Christopher Columbus, the United States will, unfortunately, not be there.

The war has thrown into vivid relief the great truth that the citizens of every nation are also citizens of the world, and that the good of every nation is bound up with the good of every other. America plays so great a part in world production, and has, as a result of the war, such overwhelming financial strength, that the Genoa Conference will necessarily be partial and incomplete without her.

#### Heavy Burden of War

With the willing aid of America Europe could readily reconstruct her finances and renew her economic strength. To understand this we have to realise that before the war Europe derived large quantities of food and raw material from America and exported goods in exchange either to America or to some country from which America imported. Europe now greatly needs American material, but cannot afford to buy it.

Again, the war cast a heavy burden of debt on the European fighting nations. European war debts to America now obstruct the progress of all Europe. Here is a list of the countries which owe between them over 11,000 million dollars, or over £2,200,000,000, to the United States.

Great Britain	Austria	Latvia
France	Poland	Hungary
Italy	Serbia	Greece
Russia	Rumania	Finland
Belgium	Lithuania	Estonia
Czecho-Slovakia and Armenia		

Great Britain owes America 4573 million dollars; France owes her 3035 millions; Italy owes her 1809 millions.

Our own debt to America was really caused by our big war lendings to our European Allies. We gave our credit, mortgaged our resources, and imperilled our future, to help our friends.

We know that if the war had gone on into 1919 America would have sacrificed many lives, and, as she was fortunately spared that supreme sacrifice, it is hoped that in the end she will be able to make financial sacrifice, especially as a prosperous Europe would help to make a prosperous America.

However, even without America, Genoa can give us a new Pact of Peace, in which all Europe can join. The full resumption of trade, and the renewal of prosperous production in the fullest possible degree, hang upon this.

#### Old States and New

The Peace Treaty of Versailles split up old States and made many new ones, and, unfortunately, this, while good in one sense as satisfying political aspirations, has disturbed work and trade. In many cases the new States have set up trade barriers against each other, and in some instances political boundary lines have been driven right through thriving industries, separating coal from raw materials, and so on. The European Governments, finding it difficult to raise revenues, have printed paper money so freely that the notes have very little buying value, while their existence makes it very difficult to make a practicable exchange basis between one country and another. All these things urgently need frank discussion.

Genoa can give us a European understanding which will help the nations to get rid of their wasteful and disastrous armaments, which will pull down the barriers impeding trade, and thus bring each one to the help of all. *Picture on page 12*

## THE MUMMY THAT TURNED IN ITS COFFIN

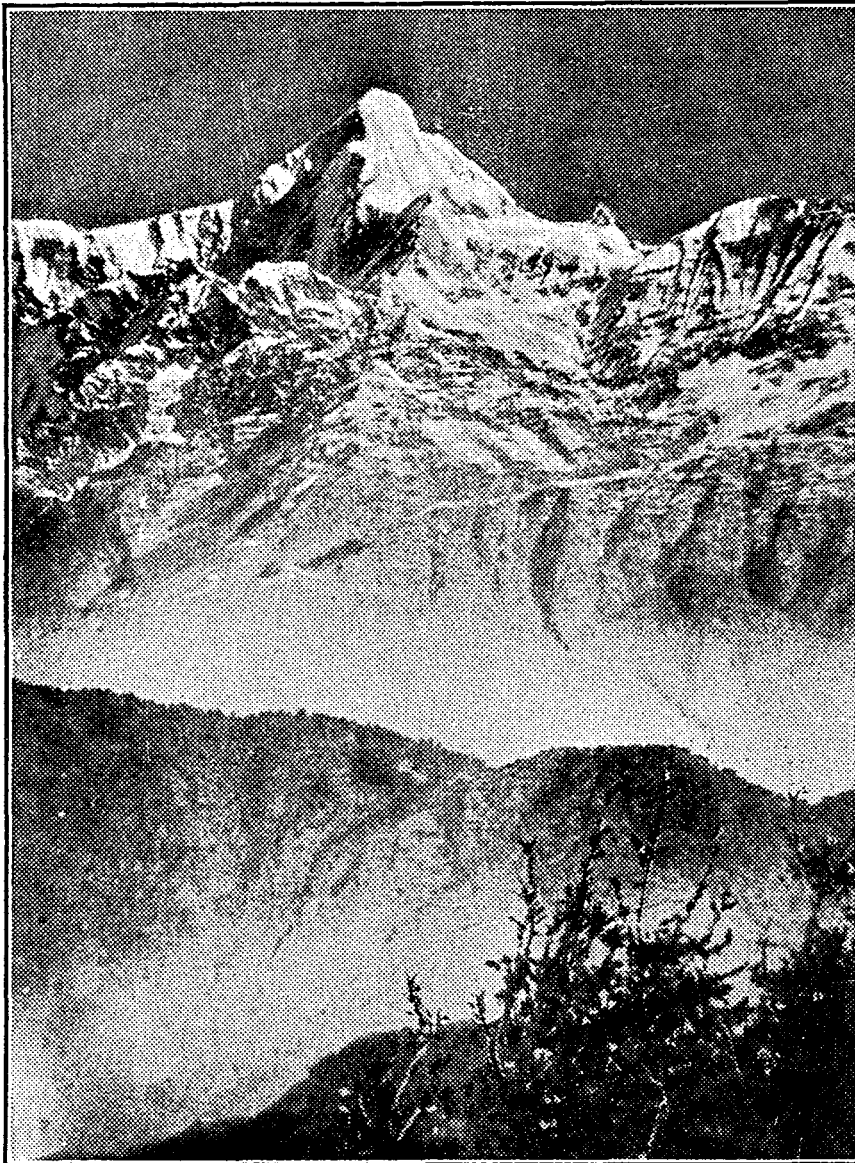
A GROUP of British Museum officials was gathered round a case containing an Egyptian mummy. It was the mummy of a priestess named Katebet, who lived nearly three thousand years ago.

It had been reported that the mummy was gradually turning over on to its left side. At first the idea was treated as an absurdity. The case was examined, and the verdict was that Katebet lay in exactly the same position as that in which she had been since the year eight hundred and something B.C.

But this did not satisfy a student of mummies who had reported the supposed movement. She went day by day and watched, and took note of her observations, and at last she was able to prove to the officials that the mummy had slightly turned.

The explanation is that the vibration of the building caused by electrical power plant, or the footsteps of visitors, or, possibly, by the running of underground tube trains, has caused a very gradual movement of the mummy in its case.

## LOOKING OVER SIXTY MILES OF MOUNTAIN



This beautiful photograph of the Himalayas was taken with a wonderful new telescopic camera that will photograph objects 60 miles or more away as though they were quite near. In this picture the shrubs in the foreground were only 20 yards from the camera and the peak in the distance was 64 miles away, so that we are actually looking across more than sixty miles of country. A picture of the camera is given on the back page

## NEWS FROM EVERYWHERE

New-laid eggs have been selling in Donegal market at three farthings each.

The Post Office is inviting tenders for advertisements on the backs of postage stamps.

All depositors in the United States Postal Savings Bank must have fingerprints taken before opening an account.

#### Three Years with a Broken Spine

A woman who has just died in London had lived three years with a broken spine, the result of an accident.

#### Marks Six a Penny

German marks, worth one shilling each before the war, are now being exchanged at the rate of six a penny.

#### Early Strawberries

March strawberries from Burnham-on-Crouch, Essex, were sold in Covent Garden Market, London, at 54 shillings a pound.

#### Eight-Pound Necklace

An Englishman has purchased a necklace from the Austrian crown jewels that once belonged to Maria Theresa for £100,000. It contains 196 pearls, and weighs eight pounds avoirdupois.

The latest census figures show Canada's population to be 8,772,631.

The platinum points have been stolen from the lightning conductors on Notre Dame Cathedral, in Paris.

By beating Oxford by nine events to one in the University Sports this year Cambridge established a record.

#### Cheaper than in Pre-war Days

Margarine, according to official returns, is now one per cent. cheaper than it was in July, 1914.

#### Law Court Breaks the Law

The superintendent of the Nuneaton police has been fined for allowing the law courts' chimney to be on fire.

#### Preventing Cruelty to Birds

An Act of Parliament which has just come into force makes it illegal to import into Britain plumage other than the feathers of the ostrich and eider duck.

#### Baked Money

A man and woman at Waltham, before going to see a wedding, placed some Treasury notes in an oven for safety. Their son came home and lit a fire, and the notes were burned up.

## NEW HOME OF THE REINDEER

### FROM ONE CONTINENT TO ANOTHER

#### Will Alaska Supply the World With Meat?

#### PROFIT OF 900 PER CENT.

Alaska is fast becoming the world's greatest reindeer country, and, although fewer than thirty years have passed since the first reindeer was introduced, the beasts are now numbered by the hundred thousand.

It was the fact that Alaska was so near to Siberia—only 36 miles across the Bering Strait—that first gave the idea of taking reindeer from Siberia across the Strait into Alaska, with a view to rearing a great herd of deer that should not only feed the people of Alaska, but multiply and increase until it was able to feed the United States.

The experiment was tried and proved a great success, and the United States Government has netted a return of over 900 per cent. on the comparatively small sum that it invested in the business. It has spent altogether £60,000, and up to the present the returns have considerably exceeded £600,000.

#### Looking Ahead

This reindeer industry has grown up so gradually and Alaska is so far off that very few people, even in America, realise its enormous success and the tremendous possibilities that lie in its future. Far-seeing men believe that when all the vast cattle ranches of the Western States of America have been cut up into farms Alaska will supply the whole of the United States, and possibly Europe, with reindeer meat.

The story of how this industry has grown up is a great romance. It was a missionary, Dr. Sheldon Jackson, who first conceived the idea of taking reindeer from Asia into America. He realised that with the encroachment of white men on the hunting-grounds of the Eskimos and Red Men the stocks of seal and walrus and game would soon be exhausted, and that the natives would have to starve if some other source of food were not available.

#### A Land of Barter

He approached the United States Government, and in 1892 was given authority to import reindeer from Siberia. That year 171 animals were conveyed across the Bering Strait into Alaska, and by the end of ten years 1280 reindeer were taken over. That is the total number imported from Asia.

The conditions in Alaska suited the reindeer admirably. They thrived even better than had been expected, and multiplied exceedingly. From the original 1280 no fewer than 230,000 have been produced, of which 90,000 have been used for food and 140,000 still remain. It will be only a few years before these increase to a million.

When Dr. Jackson first went to Siberia to buy the reindeer the natives there knew nothing of money and would take only goods in exchange for their animals. The missionary therefore returned to America and obtained a cargo of cotton goods, hunting rifles, cartridges, flour, lead, and candy for the children, and, going back to Siberia, exchanged these for reindeer.

#### Lassoing the Reindeer

The animals were lassoed and their feet tied; and then they were conveyed out to the ship in a flat-bottomed boat.

Already the reindeer-rearing has had a great civilising effect on the Eskimos, who have passed from the primitive nomad, or wandering, state into the more advanced pastoral condition. In the herds of reindeer they have an assured means of support and an opportunity of accumulating wealth.

The reindeer is undoubtedly a great asset to Alaska. It is used for food and transport, and reindeer racing affords a recreation in a land where any form of relaxation is scarce.



## INVENTIONS &amp; IDEAS

## Things Just Patented

By Our Patent Office Expert

These inventions have been only just patented and the Editor has no further information

## A USEFUL COFFEE-POT

This coffee-pot has the outside of the flange of the lid or the inside wall of the pot grooved, and when the beverage is poured out the liquid is released, but the grounds or other matter are caught by the grooves.



## A FOLD-UP COT

This cot has its sides and bottom hinged in the middle, and the posts also are hinged, so that the whole can be closed up, as shown in the picture. This enables it to be packed for travelling. The cot can be made of any material.



## A NEW FORM OF TEAPOT

In this teapot the tea rests in a diaphragm just below where the lid of an ordinary teapot is, and the water is contained in a receptacle above. This is only released and allowed to infuse the tea from time to time whenever it is required for use.



## SAW AND MITRE BOARD

This saw is fitted on one side of a graduated blade with a shaped portion that can be used as a mitre, and on the other side it has a projection with its face at right angles to the edge, so that the saw can be used also as a square.



## A NEW KNIFE-SHARPENER

This device is made up of star-shaped plates of hardened steel, fastened together at the centre by a bolt and nut. To sharpen the knife the blade is drawn rapidly between the two plates.



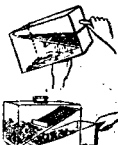
## A QUEER BATHING CHAIR

This is a chair fitted with rollers below to roll along the sand, and with an air chamber above to keep it floating in water. By turning a handle a propeller is revolved and the chair moves through the water in suspension or, when in shallow water, by rolling along on the sand.



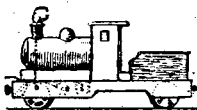
## A CINDER-SIFTER

A device for sifting cinders without getting dust or dirt on the clothes. The outer case has a diagonal grating inside, and a cinder tray with cinders and dust is then inserted at the bottom, and the whole apparatus turned upside down for sifting.



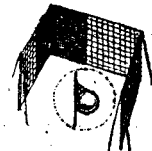
## AN IMITATION STEAM LOCOMOTIVE

This toy engine has the sound and appearance of steam imitated. A tuft of cotton-wool is worked in and out of the funnel by an attachment that moves up and down with the wheels, and, by having two surfaces of sand-paper rubbing against one another as the wheels move, a very passable imitation of the puffing of steam is obtained.



## A GOLF PRACTICE NET

This net is really double. The outer net, with a wide mesh, actually stops the ball, but if it were alone the ball would bounce back after being struck. By having a second and finer net the ball is carried into the stronger net with its force broken. The inside net is carried through the rear net and forms a pocket.



## WHO WILL BE A DOCTOR?

## Where Medical Men Are Wanted

## NOBLE CAREERS TO FOLLOW

Few of us in England live where we could not find a doctor round the corner if we were in need of one. There are upwards of 2500 of them in Greater London alone, and we shall not go far wrong in supposing that this year's census will reveal something approaching 15,000 in Great Britain.

But we are much more favoured in this respect than some European nations, among which, before the war, Germany was the most prolific in medical men, and Russia the least.

Russia is, perhaps, worst off of any European nation now; but Poland, with only 2000 doctors for a population of 25,000,000, is in a bad way; and Serbia has only 300 doctors outside her army surgeons to tend her 4,000,000 people, so that one doctor should look after more than 12,000 patients.

But the little land of Serbia is in medical luxury compared with China, for in that enormous land of 400,000,000 souls—the largest aggregate by far of any living nation—there are no more than 2000 doctors, or one doctor for every 200,000 people.

## If Brighton Had Only One Doctor

There are not very many towns in England with a population quite close to 200,000; but among big English towns which have populations less than that are Brighton, Croydon, Plymouth, Derby, Sunderland, Cardiff, and Swansea. Imagine those towns with only one doctor apiece! And imagine West Ham, Portsmouth, Nottingham, Leicester, Hull, Bristol, and Bradford with only one doctor and an assistant, for they certainly would not have more if they were in China; and Birmingham would have only four, Liverpool the same number, and Manchester and Liverpool together perhaps seven. Leeds and Sheffield would muster two apiece.

The great Chinese city of Peking, with 6,000,000 people, nearly as many as Greater London, has only seven medical students; and of all the 36,000 students who are growing up in China to try to take in Western ideas only 1153 have chosen medicine.

## A PEEP INTO THE PAST

## Outlaw's Descendants Still Suffer for His Crime

Far back into English history we are taken by claims to peerages now being investigated by a committee of the House of Lords.

One of these would be allowed if a holder of the title claimed had not been outlawed in the seventeenth century. This meant that the law ceased to give him any protection, and that if found in England, he was liable to be killed at sight.

The title in this case illustrates the varied methods of spelling proper names which used to be common among all classes. The barons of Coroghmore, for example, signed themselves at random Carraghmore, Coraghmore, Curoghmore, Curraghmore, Curroghmore—just as Shakespeare used to vary the spelling of his name.

In another case two ladies claimed descent from the original Earls of Warwick and Salisbury, holders of titles which dated back to twenty-four years after William the Conqueror landed at Pevensey Bay.

Descent was traced through the Duke of Clarence who was drowned in a butt of malmsey wine, and through a number of other unfortunate people who were "attainted" and beheaded for treason, showing what dangerous times the ancestors of the claimants passed through.

## WEIGHING BY ELECTRICITY

How Radium is Measured  
SEARCHING 500 TONS FOR A FEW GRAINS

A wonderful account of the vastness of the problem of producing radium was given by Sir Ernest Rutherford the other day at the Royal Institution.

From five thousand tons of the mineral carnotite only a tenth of the amount is rich enough for the chemist to treat, and this 500 tons, selected by hand-picking, produces after many elaborate chemical processes some fifteen grains of radium.

If we represented the picked ore by a line drawn from London to Edinburgh, he said, the actual amount of radium it contained would be represented by a line four inches in length!

One of the most remarkable features of radium is that, in spite of the very small quantities in which it is employed, the exact amount contained in a tube or bottle can be measured very accurately within a few minutes. It is not even necessary to open the bottle to examine the contents.

Radium is weighed, so to speak, by electricity; the phial or tube is placed near a sensitive electroscope—the most delicate instrument we possess for measuring very minute quantities of electricity—and by comparing it with a known standard amount the value of the radium is quickly found.

By this simple method of 'testing' hundreds of thousands of pounds' worth of radium are sold every year.

## HOLIDAY OF EIGHT YEARS

## Strange Adventures of a Russian Family

The town of Wichita, in Kansas, U.S.A., has been excited over the return home of a Russian mother and four children after a trip to Europe that had lasted eight years.

In 1914 Mrs. Tischenko set out with her three children for a three-months' holiday to see her parents at the Russian town of Saratof. There she was caught by the war, and return was impossible.

When the war ceased and Bolshevik rule began the family was not allowed to leave the country. For five years no letter passed between the husband in America and the wife in Russia.

At last Mrs. Tischenko managed to reach Moscow, where there was an American agent, who lent her money to reach the coast—about 35 American dollars, or 4,550,000 roubles.

Then she got into communication with her husband, and when they reached their American home only one of the children, a girl, was old enough to remember her father.

## TRUE COMRADESHIP

## Employer Gives His Blood for His Servant

"Unless he has blood pumped into his veins he will die from weakness."

That was the verdict of the doctors at St. Bartholomew's Hospital upon a motor-driver who lay in one of the wards dangerously ill.

He was an oldish man who had been thirty years in one situation, first as coachman, then as chauffeur.

His employer, a doctor at Kew named Lowry, was told of his old servant's desperate condition. Without hesitation he said, "He shall have my blood. I will go up at once and let them transfuse as much as they think necessary from my body to his."

The operation was successfully carried out; several ounces of blood were transfused; the chauffeur's strength at once increased. He is now well on the way toward recovery, thanks to the doctor's ready help.

Here is a pleasant example of real comradeship between two who have been employer and servant for a long time, and have earned one another's affection and respect.

## THE WEEK IN HISTORY

## FRANCIS BACON

## Wisest, Brightest, Meanest of Mankind

## THE FATHER OF MODERN SCIENCE

- April 9. John Opie died in London . . . . . 1807  
10. Cecil Rhodes buried . . . . . 1902  
11. William and Mary crowned . . . . . 1689  
12. Henry Clay born in Virginia . . . . . 1777  
13. Magdala captured by the British . . . . . 1868  
14. Abraham Lincoln shot . . . . . 1865  
15. John Motley born at Dorchester, U.S.A. 1814

Francis Bacon, afterwards Sir Francis Bacon, next Baron Verulam, and finally Viscount St. Albans, died on April 9, 1626, from a cold caught while stuffing a



Francis Bacon

fowl with snow to find how long it would keep the food in good condition.

Bacon, whose philosophy marked a turning-point in the world's methods of learning and who was a very charming essayist, is, as a man,

a fascinating but uncomfortable study. Alexander Pope called him "the wisest, brightest, meanest of mankind."

His meanness is more clearly proved than either his brightness or his wisdom. What Bacon did not have was fine character, and without fine character no man can be really wise.

Bacon's father, Sir Nicholas Bacon, was the Lord Keeper of the Great Seal under Queen Elizabeth and one of her trusted advisers. Francis, a younger son, was exceedingly clever from youth and very ambitious and self-confident, with a strong thirst for power and fame. Quite early he became convinced that knowledge was being sought by men in a wrong way, and that he could teach the world a better way. To do this was his life's ambition.

## Clever Man's Fall

But to do it he thought he needed money and power, and so he aimed first at being successful. How he would gain success did not trouble him. He was willing to flatter people, and to be patronised, and be guilty of shady conduct if he could secure his purpose.

He rose as a lawyer till he was Lord Chancellor and a viscount. Then his wrong-doings were brought home to him, and he fell swiftly into deep disgrace. He had been treacherous to his friends, and as a judge he had taken bribes. To this last charge he pleaded guilty, and was fined £40,000, was imprisoned in the Tower, and ordered never to appear again in parliament or court.

He lived in the country five years longer, working at his scheme whereby he thought men could best gain knowledge. His idea was that in the past men had begun to seek knowledge by having big fancies, which they took as idols and tried to think were true, and so much that they called knowledge was not real. What they should do, he argued, was to build up knowledge from the facts of nature found by experiment.

## Book of Famous Essays

Bacon is thus the father of modern science. But his actual plans have not been adopted, and he himself did not make any discoveries. His own facts amounted to very little, but he impressed the world with a valuable broad idea.

Now it is his book of essays that is chiefly read. His writing is pithy, always shrewd, often wise, and has flashes of great beauty. Bacon had elements of greatness in him, marred by unaccountable weaknesses. Though he failed so lamentably he did not lose his self-confidence, but in his will wrote, "For my name and memory I leave it to men's charitable speeches, and to foreign nations, and to the next ages."

And mankind has received the legacy with a sigh.



## THE CUCKOO AGAIN

### When Does It First Arrive?

### BIRD OF MANY PROBLEMS

By Our Country Correspondent

Summer is icumen in,  
Loud sing cuckoo

A number of readers in different counties have written to say that they have already heard the cuckoo.

Certainly when the cuckoo has arrived we can say with truth that summer is a-coming in; but when does this bird first arrive? That is the vexed question to which it is so difficult to get a satisfying answer.

One reader at Cheltenham tells us that he heard the cuckoo on March 7, and, in order to remove any doubt, watched and actually saw the bird. If what he saw really was a cuckoo, then this date would seem to be a record for earliness. The best expert authorities, however, all agree that the cuckoo rarely arrives till mid-April.

Our reader may, in all good faith, have been misled. A boy may have made the sound, and the bird he saw may have been some other bird, somewhat similar in size and colour, mistaken in an uncertain light. Such mistakes are constantly made even by experts.

Gilbert White, in his Calendar, gives April 7 as the earliest date of arrival, and Markwick says April 19; while Leonard Blomesfield records the earliest arrival as on April 17. Other authorities agree, and there the matter must be left. Many nature students, however, will feel confident that they have seen and heard the cuckoo in early March.

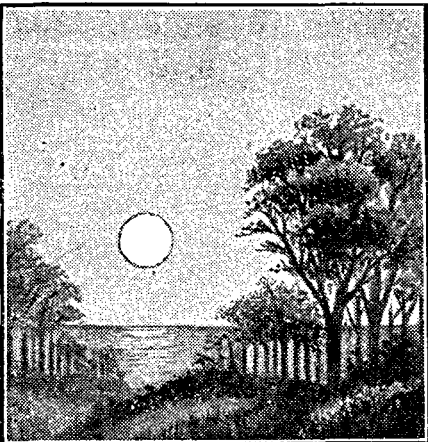
Other problems centre round the cuckoo. The bird, of course, makes no nest of its own, but places its eggs in the nests of other birds, the colour varying according to the eggs of the other bird.

It was once thought that the cuckoo always laid its eggs on the ground and carried them in its beak to the nest, but it is now known that many, at any rate, are laid directly in the nest, the cuckoo removing one of the other bird's eggs when it places its own in position.

How many eggs a cuckoo lays is not certain, but one bird has been known to lay 21, most of them appearing at intervals of 18 hours. It is believed that one cuckoo places all its eggs in nests of the same kind of bird.

It is the male that arrives in England first and makes the cuckoo call. The female follows, but her note is a mere bubbling sound, rarely recognised.

## THE MOON NEXT WEEK



The moon at 10 p.m., summer time, on April 12

## Newspaper Notes and Queries

What is a Jour de fête? A holiday.

What is a Village Pound? A fenced enclosure inside which stray animals are placed.

What is a Holograph? A document, such as a letter or will, in the handwriting of the person from whom it issues.

What is a Mare's Nest? A supposed discovery that proves a hoax. The phrase dates back to the 16th century, and is used by Beaumont and Fletcher, the dramatists.

## EXPLORING THE UPPER AIR

### Observatories Three Miles Above the Sea

## WEATHER ON THE ROOF OF THE WORLD

By Our Weather Correspondent

Students of meteorology will learn with eager anticipation the news of the projected expedition, by the well-known Italian explorer Dr. Filippo de Filippi, to the great upland plateau of Central Asia, the so-called Roof of the World.

Dr. Filippi intends to establish a series of meteorological observatories at a height of nearly 20,000 feet above sea level, and the expected records should be of the utmost value to science.

Until a few years ago hardly any knowledge of the atmospheric conditions which control the weather could be obtained except near the surface, and a few observatories on mountain peaks gave us all our data for the upper air.

Now frequent observations are made by means of small, unmanned balloons, which occasionally reach a height of from 15 to 20 miles; but we have very few regular series of records at heights of more than 10,000 feet.

## FRIENDLY SNAKES

### Woman Who Wins Their Confidence

One thinks of snake-charmers as dark-skinned Orientals, with gauzy draperies wrapped round them and heavy-scented blossoms in their hair.

At the Natural History Museum in London there is a snake-charmer who uses no charmed incantations, and does not pipe to the reptiles. She is a young woman in coat and skirt, very business-like and alert. It is part of her duty to unpack the live poisonous snakes which are sent to the museum from the countries in which they are found.

She never takes new-comers out of their packing-cases—which are usually glass jars—without wearing rabbit-skin gloves to protect her hands in case they should resent being handled. But as soon as they get to know and trust her, which happens very quickly, she takes them up in her bare hands and lets them coil round her arms and neck.

Handled in the right way, she says, they are quite friendly. It is only when they lack confidence in human beings that they are made dangerous by fear.

## HORSE DONS A TIARA

### Rings Entangled in a Mane

For the first time a horse has been seen in a London street adorned with jewels like a fashionable woman.

It ran away with a grocer's van and drove its head into a jeweller's shop window on Finsbury Pavement. Then it drew back with a diamond tiara glittering on its forehead, a pearl necklace round its neck, and brooches and rings entangled in its mane.

It shook itself, and all the valuables dropped off. Some fell under its hoofs and were trodden into shapelessness, others rolled away into the road and were picked up out of the mud.

The crowd that collected were a credit to London. The jeweller said, "They were very good in bringing back the things they picked up."

Altogether between £3000 and £4000's worth of jewellery was scattered by the horse, and scarcely anything was stolen.

## WORLD'S BIGGEST HOTEL

Work will shortly be started in Chicago on what is to be the world's largest hotel. It will be twenty-five storeys high, have three thousand guest rooms, a hall to seat four thousand people, and banquet hall and dining-room accommodation for two thousand patrons eating at one time.

## C.N. QUESTION BOX

### Little Puzzles in Natural History

Answered by Our Natural Historian

All questions must be asked on postcards, and not more than one question on each card.

Can Goldfish be Kept in an Iron Tank? Yes, provided the water is kept fresh and they are shaded from bright sunlight.

What are Knots in Wood?

The beginnings of branches which have either been cut off or died before the tree was felled.

Does a Glow-Worm Shine in Winter?

In winter it is in the larval stage, and that is slightly luminous, but not bright like the perfect insect of summer.

What is the Smallest Bird's Egg?

The gold crest's, which is about half an inch long. It is of pale flesh colour, though sometimes white, spotted at the larger end with reddish brown.

Do Red Admiral Butterflies Hibernates?

A great many do. They are the last of our British butterflies to creep into winter quarters, and they may sleep so soundly as not to appear again till the following June.

Which Becomes the Chicken, the White of an Egg or the Yolk?

The chicken comes from a small disc of living matter on the upper surface of the yolk. The white and the yolk are simply a store of food for the use of the growing chick.

Do Feathers Grow From the Entire Surface of a Bird's Body?

No; though in most cases the feathers completely cover all but the beak and legs, they rise from limited areas in the flesh, not from every part.

Does a Stag Shed its Antlers Every Year?

Yes; the old ones are dropped in February, and the animal at once begins to grow a new set. The growth is amazing, antlers weighing many pounds being produced in about ten weeks.

Is There Only One Kind of Tree Frog?

There are many species. It seems that wherever frogs dwell in or near tropical forests some of the frogs have taken to the trees, added adhesive discs to their toes, and become true arboreal tenants.

Are the Hedges not too Cold for Birds to Sleep in in Winter?

The birds that winter in this country select sheltered spots, and their feathers prevent their bodily warmth from escaping quickly, but in very severe weather they are often frozen to death.

Do Wagtails Migrate?

The yellow wagtail is a migrant; the grey and pied wagtails are partial migrants—that is, some remain here all the year and others come and go; and the white and blue-headed wagtails are only casual visitors.

What is the Greatest Distance at Which a Dog Can Scent a Person?

That is unanswerable, for we cannot tell whether sight or scent is the more important to a dog which recognises a distant person. In any case, where scent counts the distance would vary with the direction and power of the wind.

What is a Firefly Like?

It is of an elongated oval shape, with an oval spot on each side of the thorax. These spots are generally opaque and dull white when the insect is undisturbed, but on its being handled they give out a greenish light that grows brighter and brighter. The underside of the abdomen gives out an orange light.

Which is Man's Best Friend Among the Animals? Undoubtedly the dog, whose love of man is unfailing and whose sense of duty is constant. Many splendid stories of the intelligence and faithfulness of a Yorkshire dog illustrating this fact are told in My Magazine—the C.N. monthly—for April, now lying on the bookstalls with this paper. The dog is a retriever named Sweep, and between him and his master there is a perfect sympathy and love.

## GIANT OF THE HEAVENS

## THE HERDSMAN AND HIS TWO DOGS

## Chasing the Great Bear Round the Pole

## WHAT THE SPECTROSCOPE REVEALS

By Our Astronomical Correspondent

Observers of Jupiter will have noticed a beautiful golden star some way to the left of him and much higher in the sky. This is Arcturus.

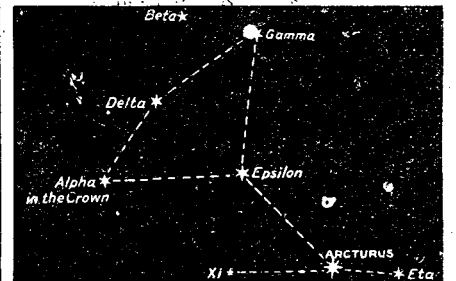
Though not nearly so bright as Jupiter, it is the brightest star in that region of the sky. It became famous last year when it was measured for the first time by the wonderful interferometer instruments at Mount Wilson Observatory, and found to be a colossal sun over sixty million miles round.

Arcturus is thus a giant of the heavens, and our Sun, though 1,300,000 times the size of our Earth, is but a tiny ball compared with it. Indeed, if we imagine our Sun to be but one inch in diameter, Arcturus would be, by comparison, a globe two feet in diameter.

## Blue and Yellow Stars

But, as this star was described in the C.N. for July 9 last year, we will pass on to other wonders of the splendid constellation of Boötes, the mythical Herdsman who, with his two dogs, Canes Venatici, is for ever chasing the Great Bear round the celestial Pole.

One of the most interesting of these stars is Epsilon in Boötes, also known as Pulcherrima. In a comparatively small telescope it is seen to consist of a pair of great suns. The larger one, calculated to be thirty-three times as bright as our Sun, is a bright yellow, and is a sun



The Chief Stars of Boötes

like our own, but larger. The other one, much smaller and giving only about three times our Sun's light, is a fine blue.

Their light has been found to take 65 years to reach us, so they are more than twice as far away as Arcturus.

There is spectroscopic evidence that the larger yellow sun has a great luminous world revolving around it; and also that this system of triple suns is nearer to us by 580 miles every minute.

Gamma in Boötes, a star of medium brightness, like Pulcherrima, will be found between Pulcherrima and overhead. It is nearer to us, its light having been recently found to take about 56 years to reach us. Delta in Boötes, of about the same brightness, has been found to be 105 light years distant. Beta in Boötes, a rather fainter star, is about the same distance away.

## Pair of Little Suns

Eta in Boötes, the fairly bright star a little to the right of Arcturus, is only 32 light years distant, but much the nearest is the wonderful little star Xi, about 18 light years distant.

This star is really composed of a pair of suns revolving around some point between them in about 128 years. They are much smaller suns than ours, probably not a quarter of the size, and therefore their united radiance makes them shine upon us as only a tiny star of the fifth magnitude, so it will be best to look for it toward the end of the week and afterwards, when the Moon will be out of the way. But this, of course, applies to all the stars. G. F. M.



# MEN OF THE MIST

The Exciting Adventures of  
Two Boys Among the Indians

Told by T. C. Bridges,  
the C.N. Storyteller

## What Has Happened Before

A brief synopsis of the early chapters will appear in next week's issue.

## CHAPTER 9

### The Big Bore

THERE had been no swimming bath at the school at Wasperton, and neither of the boys had ever had a chance to learn to swim. But it was too late for Sam to catch Clem, who, still grasping his spear, had gone clean under.

The plucky Jap did not hesitate an instant. He dived over the side, and vanished in Clem's wake.

Billy, left alone, did not lose his head, but turned the boat in the track of the line of bubbles that he saw rising. Suddenly the water broke, and to his intense relief he saw Sam rise, holding Clem by the back of his shirt.

Billy drove the boat alongside, and Sam caught hold of the gun-wale.

"Help pull him in," panted Sam. Billy sprang to obey, but in his haste knocked one oar overboard. He did not wait to recover it, but grabbed hold of Clem, and with a great effort managed to hoist him in. Then he helped Sam aboard.

"I say, that was fine of you, Sam," he said gratefully.

Sam merely smiled and turned his attention to Clem.

Clem was little the worse. His trouble was that he had lost his spear, and for this he at once began to apologise.

Sam cut him short.

"We get back," he said in his good but curiously-clipped English. "We get back quick. Give me oars, please."

"I'm sorry," said Billy, "but one's gone overboard. We shall have to drop down a bit and pick it up."

Sam snatched up the remaining oar, and, pushing it out over the stern, set to rowing frantically toward the bank.

Billy was astonished.

"Why, what's the matter?" he demanded.

"The tide come," replied the other breathlessly. "Tide come quick."

Neither Billy nor Clem had the faintest idea what Sam was talking about, but they could, both of them, see that he was very much upset and desperately anxious.

They could not make head or tail of it.

Sam rowed with a sort of fierce desperation; but the current was strong, and the boat, a big flat-bottomed affair, was heavy and clumsy, and for every foot he got in toward the bank she drifted three downstream. As there was not another oar in the boat all the boys could do was to sit and wait and wonder what the danger was.

They had not very long to wait. The boat was still quite fifty yards from the bank when the current which had been sweeping downstream seemed to be stopped short. It simply ceased to exist, the effect being as though great lock gates had been suddenly closed. But before Sam could take any real advantage of this change there came a curious hissing sound out of the soft darkness in the direction of the sea.

In a flash Sam ceased his efforts to reach the bank, and, with a mighty swing, turned the boat so that her bow faced downstream.

And still the boys stared blankly. The hissing grew louder, and suddenly Billy pointed.

"The wave!" he cried. "Clem, the wave!"

Clem stared, hardly able to believe his eyes. For there, racing up from the sea, was a wave at least eight feet high, filling the whole river from bank to bank.

It was not the least like a storm wave, for it was smooth as glass, but the pace at which it travelled was amazing. What made it all the more startling and even terrifying was the phosphorescence that tipped this wall of water with a rim of bluish light.

"I know," gasped Billy. "It's a bore—a tidal wave."

It was the last thing he said for some time, for the wave was upon them.

The boat rose until it stood on end, and the boys were forced to clutch at the thwarts to save themselves from being flung backward. The last thing that Billy and Clem heard was a loud shout from Sam.

"Hold to boat! Hold tight!"

Then the heavy craft was literally up-ended. She capsized, and all that the boys knew was that they were under water and ripping through it at a fearful pace.

Half-choked, blinded, chilled to the marrow, Billy hung on like grim death, and just when he felt that he could cling no longer, found his head above water.

"Clem!" he cried hoarsely.

"All right. I'm all right," came Clem's half-strangled reply; and then, to Billy's intense relief, he saw Clem clinging to the opposite side of the boat.

"Where's Sam?" was Billy's next question.

"Don't know. He must have been swept off."

"Do you think he's drowned?" asked Billy, in an awed voice.

"He swims like a fish," said Clem comfortingly. "I expect he'll get ashore. We weren't far off it when the wave caught us."

"And where are we going now?" "Up to the head of the river by the look of it," said Clem grimly.

The wave was gone, or, rather, it was ahead of them, but the boat and they with it were travelling up the river with the speed of a steam launch. Already the lights of the factory were far behind.

Presently Clem spoke again.

"It's rotten our not being able to swim," he grumbled.

"I'm jolly well going to learn," said Billy.

Clem did not answer. He was wondering whether they would ever have the chance.

## CHAPTER 10

### Virgin Forest

ALL this time the boat had been going right up the middle of the river, but now they were coming to a bend, and suddenly she swung to one side. An eddy caught and spun her, and there was a bump that nearly shook the two boys from their hold.

"We've struck something," said Clem.

"I could have told you that," replied Billy drily. "It's a big dead tree. I've got hold of a branch. I believe I can shove her in shore."

The boat was heavy, and even under the bank the tide was strong, but Billy pulled with all his might, and Clem helped.

Gradually the heavy boat yielded to their combined strength, and, swinging again, bumped into the bank and rammed her blunt bow deep into the earth.

"It's all right, Clem," said Billy cheerfully. "I've got my feet on the bottom. Come on!"

"Wait," said Clem. "We must not let the boat go."

"She won't move. She's jammed. Let's get out of the water. I'm nearly frozen."

They climbed out on to the bank.

"It's fine to feel firm ground under one's feet," said Billy, as he stamped about to try to get the blood moving again. Though the night was not cold the water had been bitter.

"And what do we do next?" asked Clem, rather glumly, as he

looked round at the huge trees towering toward the stars.

"Walk back to the landing as quick as ever we can," answered Billy. "We've got to find out if poor Sam is safe."

"There won't be any very quick moving in this wood," returned Clem. "Did you ever see anything so thick? It's like a tropical jungle. I never thought for a minute we'd find anything like this so far north."

"It's different once you get across the coast ranges," Bart says," replied Billy. "But if we keep close to the river we can't lose our way. Anyhow, we shall get warm."

Billy never said a truer word, for soon they were both dripping with perspiration. The going was awful, and the darkness made it fifty times worse. The steep bank was littered with fallen tree trunks, some of enormous size, and all grown over with moss and long grass and bush of every sort, mostly prickly.

Some trunks were still sound, but most perfectly rotten; so that when they stepped on them they crumbled to tinder and let them down into masses of wet, slimy, rotten stuff. Add to this that the ground was full of deep cracks and rifts cut by winter storms, and you may begin to have some idea of the difficulties confronting the unlucky travellers.

"Don't wonder Joe Western said this brush was no place for tenderfeet," panted Billy, "as, for about the fifteenth time, he went blundering into a hidden pit." "I say, Clem, we'd better work uphill a little. It looks better than down here by the river."

Clem agreed, and they climbed the steep slope. Here the fallen trees were not quite so thick, but the vegetation was closer than ever.

Billy, who was leading, came to a steep place, slipped, and tried to save himself by clutching at a big, wide-leaved plant which stuck out dimly in front of him. Clem heard him give a sharp cry of pain, and caught him as he fell backward.

"What's the matter?" he asked anxiously.

"Something bit me," replied Billy, in a voice hoarse with pain. "I—I'm afraid it was a snake."

## CHAPTER 11

### The Broad Man

FOR a moment Clem was so scared that his mouth went dry and he could not speak. But he quickly pulled himself together.

"It can't be a snake, Billy. There are no poisonous snakes up here. Bart said so. You've been stung by something."

"It's something pretty poisonous then," replied Billy, who was holding tightly to his injured arm.

"Come down nearer the river."



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There's a bit more light there. Let's have a look at it."

Billy was quite sick and shivery with the pain, and Clem had to help him down the steep hillside. They found a little opening, but even there the light was very dim. Still there was just enough for Clem to see that there was a dark, inflamed patch on Billy's hand and wrist.

"It's a sting of some sort," he said. "Like a nettle, Billy, only worse. Come down to the water's edge and dip it in the water."

Billy did so, and after a bit the cold water took the worst of the pain away. But the arm was swollen and almost useless, and Clem had to help Billy along. So progress became slower than ever, and in the next half hour they travelled only a few hundred yards.

"What's that?" whispered Billy, coming to a sudden stop and pointing to two dots of green fire which glowed through the darkness a little way up the hill above them.

"A wild beast of some sort," answered Clem, in a voice he found rather difficult to keep steady.

"A-and we've got no gun," said Billy. "What shall we do?"

"Yell at him," suggested Clem desperately.

The noise that the two boys made between them was enough to scare the hide off almost any inhabitant of the woods. At any rate, the owner of the eyes removed them and itself abruptly, but without the slightest sound of its going.

"I wonder if it was a panther?" questioned Billy.

"Just a wild cat, I expect," replied Clem hopefully. "But I say, Billy, let's get down close to the river again. I hate this wood."

"So do I," agreed Billy, and turned downhill again.

When they got well down to the river's edge they found themselves on the top of a steep bluff, ten or twelve feet high, which dropped to a beach of sand and shingle.

Billy stopped and looked over.

"If we got down there on the gravel we could move along quite fast," he said.

"We should get a nasty fall if we tried to climb down that bluff," Clem objected. "Let's go a little farther and see if there's a way down."

Billy agreed, and they pushed on slowly.

A little point of land ran out into the river, and, crossing this, they saw below them quite a broad strip of almost level shingle. They saw something else, too. A little farther on a figure was standing on the beach in a queer, crouching position, bending over the water, and apparently trying to rake something out of the river with one hand.

In the dim starlight it appeared to be a short, broadly-built man. Billy clutched his brother's arm.

"It's Sam," he whispered.

"I'm not so sure," said Clem. "He looks to me bigger than Sam."

"Yes; he does look a whacking big chap," admitted Billy. "Come a bit nearer and let's see before we shout."

As they moved forward the man by the water seemed to grow larger. He certainly was enormously broad. By this time the boys had had such a doing that they were both getting nervous. Though they would not confess it, they each had a suspicion that this might be a wild Indian.

They reached a point exactly above the spot where the queer-looking fellow was still groping in the water; and Clem, catching hold of a branch, bent forward to get a better view.

There was a sharp crack, the bough broke off short, and Clem, losing his balance, toppled forward and fell right over the edge of the little bluff.

Billy saw him land with a thud on the shingle. As he did so the figure by the water reared up sharply and whirled round, and Billy was nearly frantic when he saw its huge shaggy shape.

"A bear!" he gasped, and, forgetful of his injured hand and the fact that he had no weapon—not even a knife—made a flying leap down to the beach to Clem's rescue.

TO BE CONTINUED

Who Was He?

## A Famous Bishop

IN the middle of the fourth century a boy born in a North African town was sent to Carthage to study, but there he fell into bad company, which was a source of great grief to his mother, who loved him dearly.

The boy was self-willed, but, being quick at his lessons, he pleased his father, who seems to have spoiled him.

Some years later, when the father was dead and the youth had grown to be a young man, he went to Rome and then to Milan, where he became a teacher.

His mother had not wanted him to go for fear he might fall into evil ways, but he had escaped her by a mean trick. Pretending that he had at last agreed to her wishes and was giving up the journey, he said he must go aboard the ship and say good-bye to a friend. He went, and while his mother waited for him he sailed away to Italy.

His father during the boy's childhood had been a pagan, but his mother was a Christian, and taught her son the truths of that religion. He, however, sneered at them, but later on began to think more deeply, and finally became a Christian himself.

His mother, delighted, joined him; and he has left us a very touching account of the happy days they spent together. They were about to return to their African home when the mother fell sick of a fever and died.

The young man's grief was for a time overwhelming, but he went back to his native town and founded a community of Christian friends whose chief objects were study and meditation. He was ordained a priest, and wielded great influence, so that he was chosen to be a bishop.

His house was open as a home and centre for all students, and he spent his private income in helping others, living simply in order that he might have more for charity.

He visited the sick, and was active in every good word and work. Never in his presence would he allow unkind things to be said about those who were absent. Yet in controversy with opponents of what he considered the truth he was a formidable antagonist.

At last he died peacefully, though the city in which he lived was surrounded by barbarian foes, who had been besieging it for three months.

Probably no one except St. Paul had so much to do with moulding the early Church as



this man. He has left us a famous book telling us the most intimate things about his early life and mental struggles, and this book is still read all over the world. Here is his portrait. Who was he?



# Are Not the Sun, the Air, the Skies, Like an Opening Paradise?

## DI MERRYMAN

**OPTIMIST:** "But just think of the glory of being famous!"  
**Pessimist:** "H'm! If ever I became famous fame would go out of fashion."

### Mildred's and Mary's Nature Notes

#### A Jackdaw

**OTHELLO** is our jackdaw,  
 Othello sleek and trim,  
 And next to wanton thieving  
 His tub most pleases him.

He drops in any shallow  
 And, almost right away,  
 There is a gleaming whirlwind  
 Of beating wings and spray.

A drenched, bedraggled jackdaw,  
 He perches up on high  
 To preen his dripping feathers  
 And shake them out to dry.

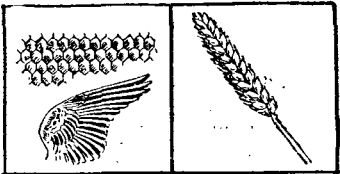
And now behold Othello,  
 Well groomed and spick and  
 span,  
 And though he be a felon,  
 He's quite the gentleman.

### Nearer the Bone, Sweeter the Tone

**A SCARBOROUGH** nigger named  
 Jones  
 Stood and sang in the sweetest of  
 tones:

"Whenever I eat,  
 I'm so fond of my meat  
 That I come out and sing to the  
 bones."

### Puzzle Birds



What birds do these two pictures represent?  
 Solutions next week

**IN** what tree would you shut up a gift?  
 The box.

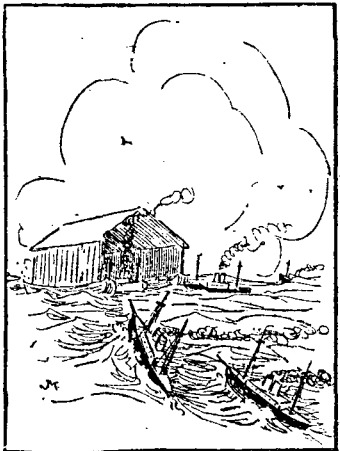
### Jack's Problem

"THIS is rather strange," said Jack to his sister Vera, handing her a piece of paper with some figures on it. "These four numbers total 45. Now, if you add two to the first number, subtract two from the second, multiply the third by two, and divide the fourth by two, the answer is the same in each case."

What were the four numbers?

Solution next week

### School Howlers

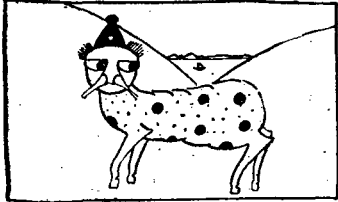


#### The Wonderful Watershed

"WHAT is a watershed?" asked the teacher, who had been giving a lesson on the river systems of a country. "A shed built at sea for ships to go into when there's a storm," answered the smart boy of the class.

**Keeping Fit**  
**A SAILOR** who lived on a ship  
 Got a rope and attempted to  
 skip,  
 But he trod on a thin  
 Piece of pineapple skin,  
 And the captain said, "That was  
 a slip!"

### The Zoo That Never Was



#### The Gazelle

**HE** has a cap upon his head  
 Just where his hairs don't grow;  
 But if he has behind his nose  
 A mouth, I do not know!

### A Chinese Saying

**IN** eighty years to dwell on earth  
 Expect not thirty thousand days  
 of mirth.

**WHY** was King John like a man  
 whose things had been mis-  
 laid by the laundry?  
 Because his baggage was lost in  
 the Wash.

### A Ruse That Failed

**JOHNNY'S** school report was deci-  
 dedly a bad one, and he  
 wondered how best to approach his  
 father.

"I can sign my name with my  
 eyes shut, Dad," he said. "Can  
 you?"

"Why, of course; that's easy  
 enough," replied his father.

"Well, just to show how very  
 easy it is, try doing it on my report  
 sheet!"

**WHAT** is the greatest of all  
 riddles?

Life: because we must all give  
 it up.

### What Am I?

**MY** first is everything you can  
 devise—

I'm rich and poor, I'm good and  
 bad;

My second is composed, for purpose  
 wise,

Of the mere refuse of the things  
 you've had.

My whole's the public rage; for  
 scarce a house

But anxiously expects my coming  
 in;

And though I'm mute and still as  
 any mouse,

I claim a share in war's loud,  
 clashing din.

Answer next week

**WHAT** letter of the alphabet is  
 necessary to a bootmaker?  
 Z: because it is the last.

### Do You Live in Hitchin?

**THE** name Hitchin, which was for-  
 merly spelt Hiche and Hicheyn,  
 is derived from a personal name,  
 and means Hicca's place. It was,  
 no doubt, at one time the home  
 of a chief or prominent person  
 named Hicca.

### ANSWERS TO LAST WEEK'S PUZZLES

#### The Problem of the Sugar Cases

We will refer to the three managers  
 as A, B, and C. A and B each had  
 two cases full, two empty, and three  
 half full of sugar; while C had three  
 cases full, three empty, and one half  
 full. An alternative solution would be  
 for A and B each to have three cases  
 full, three empty, and one half full;  
 and C to have one full, one empty,  
 and five half full.

#### Events in History

Napoleon Bonaparte overthrown by  
 Wellington, 1815.

What Am I? Waterfall

## Jacko Sings for His Supper

**THE** man was getting quite nasty. And it wasn't surprising.  
 "What do you mean," he asked for the third time, "by  
 dashing into me like that? How do you think I'm to get that  
 piano home with the wheel half off my cart?"

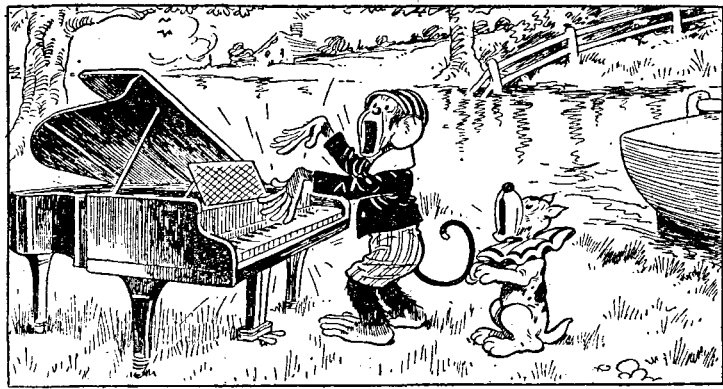
Jacko didn't know—and if he hadn't been just a little afraid  
 of a walloping, he wouldn't have cared. It wasn't that he ever  
 meant to make himself such a general nuisance, but when things  
 went wrong he always thought the luck was against him. He  
 never thought it could be his fault. He just went and did things  
 "for a lark," and got into trouble before he had thought two  
 seconds about it.

As he stood staring at the barge lying idly in the canal, the  
 water gently lapping its sides, a brilliant idea came into his head.  
 "I'll take it for you," he cried, "on the barge."

It was some time before he could make the man understand.  
 "You help me to lift it," he said, "and I'll deliver it for you,  
 honour bright." And he meant it. He thought it was a splendid  
 way out of the hole he had got himself into.

The man agreed, and they went up to the piano. They soon  
 got it down into the road, and with much pushing and pulling,  
 and a terrific lot of puffing and blowing, they managed to get it  
 to the water's edge.

But it was a ticklish business getting it on board. They



Between them the din was appalling

tried and tried till they had no more patience left, and then  
 they gave it up.

"You stay and mind it," said the man at last, "while I go  
 and fetch help."

But he had to go a good way, and in the meantime Jacko  
 grew tired of waiting. He was beginning to feel hungry, too.  
 He knew there was nothing left to eat on the barge, because  
 he had looked.

It suddenly occurred to him that he should "sing for his  
 supper," like Little Tommy Tucker. So he opened the piano  
 and began banging on it, and making a frightful noise.

It gave Toby such a shock that he nearly jumped out of his  
 skin; and when Jacko started singing the poor dog couldn't  
 bear it. He crawled over to Jacko's side and began to howl.

Between them the din was appalling.

In the middle of it all the man came back. He was alone,  
 and he looked very cross. He hadn't been able to get help, and  
 he didn't know what to do.

To relieve his feelings he gave Jacko a stinging box on the  
 ears, and shut the piano.

Jacko took it calmly.

"Are we down-hearted?" he shouted. "No, sir! Let's have  
 another try!"

And at last, strange to say, they actually managed to get  
 the great, heavy thing on board. It landed squarely in the  
 bottom of the barge, and Jacko, poor, deluded lad! thought his  
 troubles were over.

The paragraph on the right is a French translation of the paragraph on the left

### Measuring a Banana's Breath

A device has been made for  
 use on the refrigerating railway  
 cars which carry bananas to test  
 the air in the compartments  
 where the fruit is stored.

The banana continues to  
 "breathe" out carbonic acid  
 gas, as we do, for some time  
 after it is harvested, and the  
 exhaled gas must be driven off  
 by electric fans in order to  
 preserve the goodness and flavour  
 of the fruit.

Samples of the air are constantly  
 examined with the appar-  
 atus to see if the ventilation  
 is in perfect order.

### On Mesure la Respiration d'une Banane

On a fabriqué un instrument à  
 l'usage des wagons réfrigérateurs  
 qui transportent les bananes,  
 pour éprouver l'air des comparti-  
 ments où le fruit est emmagasiné.

La banane continue à exhale  
 l'acide carbonique, tout comme  
 nous autres, pendant quelque  
 temps après qu'on l'a cueillie,  
 et il s'agit de chasser ce gaz au  
 moyen de ventilateurs élec-  
 triques afin de conserver la  
 qualité et la saveur du fruit.

Grâce à l'appareil on examine  
 constamment des échantillons  
 d'air afin de s'assurer que le  
 système de ventilation fonc-  
 tionne bien.

### Tales Before Bedtime

## Once Too Often

**MILES** was a born meddler.  
 It really seemed as if he  
 couldn't help it.

Once he let Betty's canary  
 escape, because he meddled  
 with the door of its cage.  
 Another time he meddled with  
 the works of his watch, and it  
 took all the contents of his  
 money-box to get it mended.

That ought to have taught  
 him a lesson, but it didn't.

Farmer Jones's goat was  
 really quite good-tempered.  
 She was peacefully browsing in  
 the field, and didn't take any  
 notice at all of Miles and Betty.  
 But Miles wouldn't leave her  
 alone—he poked her with a  
 stick just to see what she would  
 do—and the next minute they  
 were flying down the field with  
 Nanny in full cry after them!

Now he was meddling with  
 the weir.

It was quite a small weir, for  
 the river wasn't very big. The  
 main stream ran under a mill,  
 and the weir was only an outlet  
 for waste water.

Four little sluices all in a row.  
 Miles longed to pull them up.

When the water was rushing  
 over the weir he could play a  
 splendid game. You collected  
 some sticks, and tied different  
 coloured bits of paper on them,  
 and set them afloat up the  
 stream. Then you watched to see  
 which went over the weir first.

But of course that game was  
 out of the question when the  
 weir wasn't working.

"Just my luck on a half-  
 holiday," grumbled Miles.

Then he tried to pull up the  
 first sluice—just to see if it  
 could be done. It was rather  
 stiff, but at last it came up  
 with a jerk. So did the second,  
 and the third, and the fourth.

It didn't take long to find  
 some sticks, and soon he was  
 having a fine game. He had



They went flying down the field

forgotten about everything else  
 when suddenly he felt a hand  
 on his shoulder.

It was the miller, and he was  
 so angry he could hardly speak.

"You young rascal!" he  
 spluttered. "You've let off  
 the water and stopped my  
 wheel. Haven't I enough work  
 already without boys like you  
 plaguing the life out of me?"

And he gave Miles a good  
 thrashing.



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# CHILDREN'S NEWSPAPER

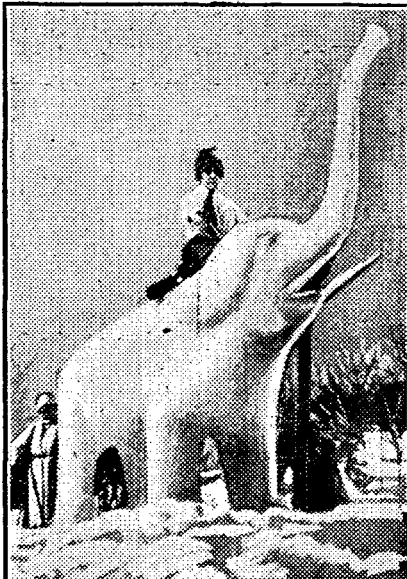
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## A REAL WHITE ELEPHANT · CABBAGES IN FLOWER-POTS · A SUPER-CAMERA



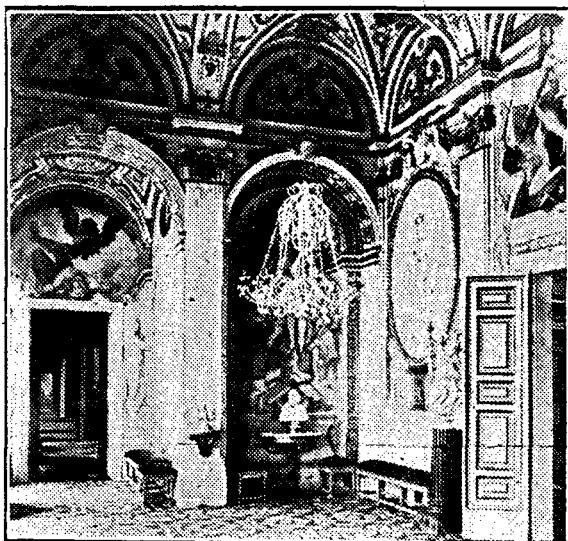
**Getting Ready for Summer**—Panama hats being bleached in the open air at a famous old hat factory at Elstree, in Hertfordshire, in readiness for the heat-wave which is hoped for in the coming summer.



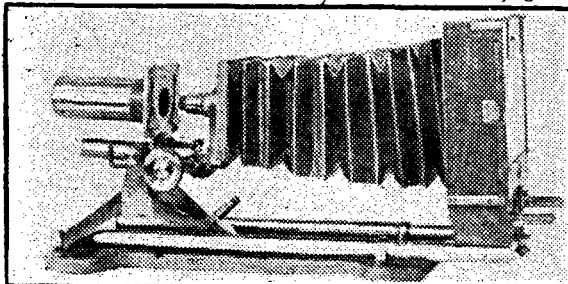
**A Real White Elephant**—A fine example of snow modelling which won first prize in a competition at Aix-les-Bains.



**Cabbages Grown in Tins**—In the Straits Settlements, where, owing to insect pests, vegetables are difficult to produce, cabbages are grown in flower-pots, or, as shown here, in old tins.



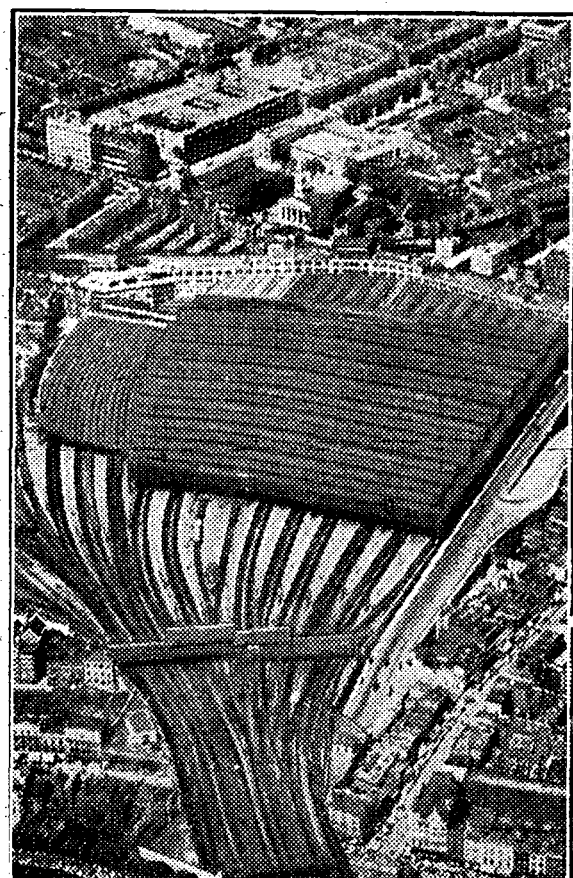
**Where the Genoa Conference Will be Held**—The beautiful room in the old palace at Genoa, where the conference to discuss Europe's difficulties will meet next week. See page 7.



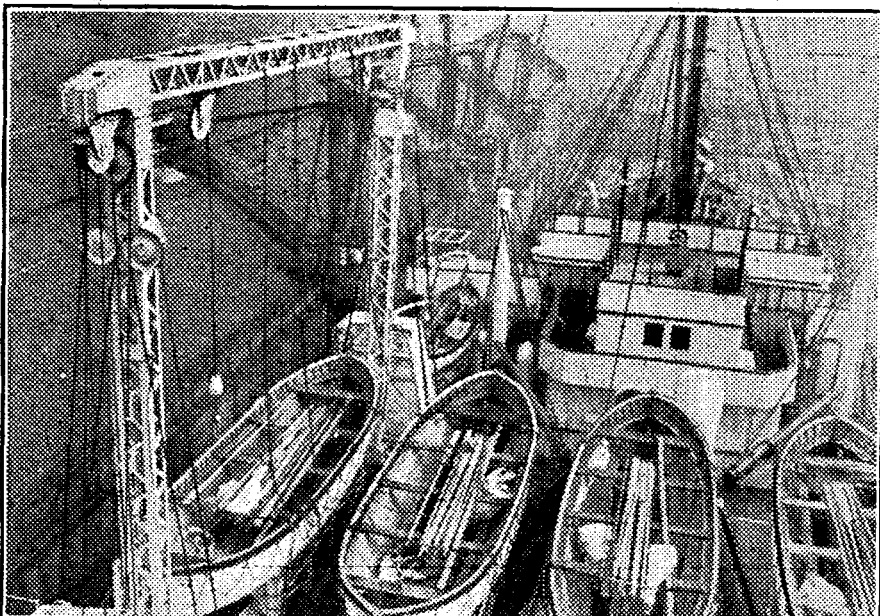
**A Super-Telescopic Camera**—A wonderful camera which will photograph objects sixty miles off and make them appear quite near. An example of this is given on page 7. If photographs near objects equally well.



**The Glory of a Ship in Full Sail**—Many sailing vessels still cross the oceans, and few sights are more glorious than a ship in full sail riding the waves, as seen in this picture of the Caradale entering Port Phillip Bay, in Australia.



**England's Biggest Railway Station Seen from the Air**—The new Waterloo Station in London, recently opened by the Queen, is the largest station in England. It has 21 platforms, and 1200 trains pass in and out every 24 hours.



**Safety First on an Atlantic Liner**—This picture shows the lifeboat deck of the new White Star liner Regina, with an electrically-worked derrick used for launching the boats.



**A Century-Old Fire-Engine**—The parish of Bottisham, near Cambridge, still uses this old fire-engine built in 1796. It is here seen with the fire brigade returning from drill.